Occidental Medical Times.

VOL. III. APRIL, 1889. No. 4.

A CLINICAL LECTURE.

Delivered at the City and County Hospital, San Francisco.

BY ALBERT ABRAMS, M. D.

The Chemical Analysis of the Stomach Contents as a Means of Diagnosing Gastric Disturbances.

Gentlemen: In the brief period of time at our disposal we can only, succinctly, review the late methods of diagnosis in diseases of the stomach. The artificial removal of the stomach contents is the only certain means of determining the character of the secretion and the degree of digestion. The removal of the gastric contents is best accomplished by the aid of the soft rubber tube, which I show you, working on the syphon principle. The introduction of the tube is simple. You ask the patient to make efforts at deglutition, and then gently and rapidly pass it into the stomach, which, when reached, is indicated by a black band on the tube. The real difficulty with which you will most frequently contend is the nausea and vomiting induced by the introduction of the tube. This sensitiveness of the fauces was formerly combated by administering bromide of potassium for a few days before the introduction of the tube. This develops a moderate anesthesia of the throat and diminishes the reflexes. A better method of preparation is that of painting the palate and the fauces with a solution of cocaine and lubricating the tube with a mixture of the same solution and olive oil. A difficulty in breathing is often complained of by the patient, which you can alleviate by asking him to take as deep breaths as possible.

You will now ask the patient to cough violently or, if this does not suffice, to forcibly compress his abdominal muscles, when a sufficient amount of fluid for chemical analysis will usually be ejected from the tube. If then no fluid returns, connect your tube with a funnel, introduce some water into the latter, then hold the funnel over the patient's head until the water enters the stomach, but before all the fluid has left the funnel, lower it quickly and you will then get the contents of the stomach, plus water. Particles of food may stop up the orifice of the syphon. When this is suspected ask the patient to cough, or pour more fluid into the funnel, which will renew the suction action of the syphon.

After the ingestion of a meal, there is first a digestive period called the *amylolytic*, which lasts, on an average, three-quarters of an hour. After this time free hydrochloric acid is present, the amylolytic digestion ceases, and a peptonization of the albumen begins. The maximum degree of acidity (0.15 to 0.2 per cent. of hydrochloric acid) is attained about five hours after eating. During the entire period of digestion, the contents of the stomach, by peristaltic action, slowly pass into the duodenum. About six hours after eating, the stomach should be practically empty, and its contents should possess a neutral reaction. A diminished amount of gastric secretion interferes with the digestion of albumen, an excess (hyperacidity) interferes with amylolytic digestion, as the latter can only occur in the absence of free hydrochloric acid.

For the purpose of determining the duration of digestion I have given this patient a meal composed of soup, bread and beefsteak. Lavage of the stomach practised seven hours after consuming such a meal would show, in normal digestion, that organ to be practically empty or containing a few fragments of food, under these conditions we would conclude that digestion is normal. We could further assume that there is probably no diminution of secretion, and absolutely, that the stomach has no difficulty in emptying itself. Should the stomach seven hours after the ingestion of a meal contain a considerable amount of food, then digestion is delayed or the viscus has some difficulty in emptying itself. This difficulty may occur in dilatation, in stenosis of the pylorus or when the motor activity of the stomach is impaired. After the duration of digestion has been determined, it will be well to study the contents during digestion, and the best time for this purpose is about one and one-half hours before the stomach is empty, a time at which, you will remember, the degree of acidity is at its maximum. We filter the fluid which has been removed and proceed to examine as follows:

The reaction is first determined with litmus paper, and we find it acid. An acid reaction may depend upon the presence of hydrochloric acid or organic acids. I will first make the various tests for hydrochloric acid, of which there are many. The first, to which I will call your attention, is, that with methyl-violet. Two test tubes are filled with an aqueous solution of methyl-violet, the solution being reddish-violet. To the one is added some of the gastric fluid, the other being used, for comparison, should hydrochloric acid be present, the solution becomes distinctly blue. Organic acids will also render the solution blue, when in sufficient concentration, which, however, does not occur in the stomach. This is one of the oldest tests, and is very uncertain, as no reaction will occur in the presence of peptones or phosphates, and on the other hand, the presence of sodium chloride may yield the same reaction as that of hydrochloric acid. The second test is, that with a solution of tropeolin, a few drops of which, when mixed with the gastric solution, on a porcelain plate, and heated, will yield a violet red color. Another test is, that with a solution of congo red, in water, which turns blue in the presence of the acid. Filtering paper saturated with the congo solution serves as a ready test for the acid. A useless test is that with a solution of fuchsine, which becomes decolorized in the presence of the acid. The most certain and simple test for hydrochloric acid is that of Günzberg. Albuminoids and organic acids will not interfere with the reaction, and the smallest quantity of the acid may be determined. The phloroglucin-vanillin solution, which is the fluid used by Günzberg, is composed of 2 parts of phloroglucin, 1 part of vanillin to 30 parts of alcohol, a few drops of which when mixed with a similar quantity of the gastric solution and heated on a porcelain plate, will yield a red precipitate in the presence of the hydrochloric acid. From the intensity of the red color, we can determine approximately the quantity of acid present, the intensity of the redness being in direct proportion to the amount of acid.

We next determine the presence of the organic acids, and for all practical purposes it will suffice, if we test for lactic, butyric and acetic acids. A solution composed of 3 drops of liquor ferri perchloridi, with the same quantity of carbolic acid, in 20 cubic centimeters of water, shows the presence of lactic acid by becoming yellow; but if free hydrochloric acid is present the solution becomes colorless. Butyric acid can be recognized by its odor, that of rancid butter, and will also turn the latter solution yellow. Acetic acid is also determined by its odor, and when boiled in a test tube with the chloride of iron carbolic acid solution, will turn the latter a brownish color. The quantitative determination of hydrochloric acid is of importance, and consists essentially of adding a $\frac{1}{10}$ normal sodium hydrate solution to the gastric secretion, 1 c. cm. of the former neutralizing 0.0365 of hydrochloric acid. Whenever the amount of hydrochloric acid is more than 0.3 per cent., it must be considered pathological. The qualitative determination of peptone is without diagnostic importance, and the same may be said of pepsine, which, when free hydrochloric acid is present, is never absent.

What conclusions may we arrive at after making these tests? We find hydrochloric acid absent in atrophy and amyloid degeneration of the gastric mucous membrane, affections which are rare also in fevers. We find it absent in the majority of cases of dilatation of the stomach, due to carcinoma of the pyloric orifice, and in a few instances of so called nervous dyspepsia. The absence of hydrochloric acid, when dilatation of the stomach exists, is almost an absolute sign of carcinoma, although the normal acid reaction, and even hyperacidity, have been found in a few isolated cases, attended by dilatation of the stomach. Lactic acid is normally found in the stomach, but not longer than one hour after eating. It originates from grape sugar, by the action of microörganisms, the sugar as you know being a product of the starch from amylolytic digestion. Now, when lactic acid is found in the stomach at a longer interval than one hour after eating, it indicates abnormal fermentation, and in the majority of cases is present when hydrochloric acid is deficient or absent. Hyperacidity of the gastric secretion often occurs in ulcer of the stomach, and in certain forms of nervous dyspepsia.

The determination of the motor activity of the stomach, by means of salol, calculated by the time consumed in the appearance in the urine of salicylic acid, or the recent method of Klemperer, by measuring the quantity of its contents discharged into the intestine in a given time, are superfluous. For the practical physician, the motor activity is best determined by washing out the stomach seven hours after eating, when, if nothing is found, it indicates the sufficiency of the muscular tissue.

Let me, in conclusion, refer to a method of determining the absorptive power of the stomach. You direct the patient to swallow, on an empty stomach, a gelatine capsule, containing 0.1 gm. of iodide of potassium. You then have him expectorate on a piece of starched paper. The addition of a few drops of fuming nitric acid, if iodine is present, will give a red color, and if the iodine be in excess, a blue color. In normal cases it has been found that the absorption is accomplished in from eight to fifteen minutes. In chronic catarrh, absorption was found to be delayed for thirty minutes, and in carcinoma for three to four hours.

LEPROSY IN HAWAII.

By F. B. SUTLIFF, M. D., Sacramento, Cal.

Read before the Sacramento Society for Medical Improvement.

When I first became interested in leprosy I was surprised at the great difference of opinion existing between those who had made the disease a study, on the question of contagion. I had always thought of the disease as contagious, in a great degree, by personal contact. It rather startled me, therefore, when consulting Erasmus Wilson,[1] to find the following: "It is endemic, but not contagious, and not hereditary." Turning to Shoemaker,[2] I find this flat contradiction: "Lepra is a chronic, malignant, contagious, constitutional disease." Some one is wrong; both of these statements cannot be correct, and the fact that such contradictory statements can come from high authority, shows that more light is needed on the subject. Dr. G. L. Fitch, in his report to the Board of Health, of Hawaii, in 1884, quotes the following from the report on leprosy, by the Royal College of Physicians:

> "The committee, having carefully considered the replies already received, are of the opinion that the weight and the value of the evidence they furnish is very greatly in favor of the non-contagiousness of leprosy. The committee can only repeat the statement made in their former report to the College, that the replies already received contain no evidence which, in their opinion, justfied any measures for the compulsory segregation of lepers."

This is high authority, indeed, but by no means infallible, for in the past the same body has changed its opinions regarding Harvey and Jenner. It will just as surely change them again, for the history of leprosy in Hawaii, is to-day a monument to its error.

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[1] Cutaneous Medicine and Diseases. [2] Diseases of the Skin.

Turning to some of the answers to the questions asked by the College of Physicians, I shall quote a few of the many replies received.

Grenada.—Dr. Aquart reported: "I have seen a few persons amongst those affected where contagion appeared evident. I consider that contagion will take place when ulcerations exist with copious discharge, and this can only occur in the first or tuberculous leprosy. I do not think the disease, in its incipient stage, transmissible by sexual intercourse."

Guiana.—Dr. Manguet: "I have met with only two cases in which after minute inquiry, I believe the disease to have been communicated by direct contact. My own opinion is in favor of the contagiousness of leprosy, and that it may be propagated by the matter of ulcerated tubercles being applied to any raw surface; but I admit that I have met with cases which would seem to preclude the idea that the disease can be considered contagious in the ordinary sense of the term. I have known instances where black women have cohabited for years with their husbands while laboring under confirmed and ulcerative leprosy, and have children by them without manifesting the slightest trace of the disease."

Dr. Pollard: "I am clearly of opinion that it is contagious in every stage and form, and especially so after ulceration. I have seen many instances which could only be referred to contagion; the convictions of the parties, and the most rigorous examinations of the history of the cases, give no clue whatever to the preëxistence of any family taint. It is notorious in respect of a white family of distinction in this colony, that, having disregarded the warnings of their medical advisers of the danger of permitting the young members to play in company with a young negro boy who exhibited the symptoms of the disease, they, one and all, became infected, and the majority of them fell victims to the fatal indiscretion."

Dr. van Holst: "From what I have seen and heard in Surinam, Dutch Guiana, where more attention is paid to the disease than in British Guiana, I believe it to be contagious. I have known an officer of high rank there, contracting it from cohabiting with a woman whose family were affected with it.[1] In Dutch Guiana people are afraid to shake hands with any persons who are suspected of the disease, and even of sitting on the chair which they occupied, or of using the same privies."

Corfu.—Proto Medico: "Two instances I have met, substantiate the opinion that it is contagious after a lapse of time. In both the wife became affected some years after the husband had been attacked."

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[1] The liability to infection in this way is undoubted.

Mauritius.—Dr. Regnaud: "I have met with two cases where the disease seemed to be transmissible; in one instance from the husband to the wife, and in the other from a man to a child of his wife from a former husband."

Sumbulpoor.—Dr. Jackson: "On the subject of contagion there appears to be some room for doubt. I have never known or heard of a case in which simple contact on one occasion has produced the disease, but by prolonged liability to contact with, or close proximity to diseased persons, there is reason to believe that the disease has been produced."

Mozufferpore.—Dr. Macnamara: "I know of many cases in which there was a clear proof of the contagious nature of the disease. I believe leprosy is also contagious when the ulcerative stage has commenced, and it appears as if the disease took a very long time to affect the system. It is not a matter of days, or even months, but of years. There can be no doubt of its transmissibility by sexual intercourse."

Singapore.—Mr. Rose: "I have met with three cases in which I can with certainty state the disease was contracted by continued and direct contagion."

I might now quote twenty or more observers who agree with Wilson in believing it to be non-contagious, and who state their belief in just as positive terms; and it is fair to suppose that they have had good opportunities to study the disease in their fields of labor, and that the opinions offered were well considered before they were given. I have only to turn a page to find answers to the question, "Is Leprosy Hereditary?" Here are replies from twenty-four men, living in different localities, the general drift of which is in support of the fact that it is hereditary. Turning still another page, I come to quite a number of answers to the query, "Is Leprosy Connected With Syphilis?" This question is so full of interest to a medical man that I am almost tempted to quote the answers in full. I can summarize them by stating that eighteen of the observers believe the disease to be almost wholly distinct; a few believe that leprosy is dependant on syphilis; and a few others hold that he who has contracted syphilis is more likely to become a leper than if he were sound. How any one can find fault with this last opinion, I do not understand. Any constitutional disease that lowers the health would be just as likely to lessen the resisting power of one exposed, or to cause a decided outbreak, if he were already affected.

The opinions you have read of late were founded on facts observed in Hawaii. Let us see, then, what some of those who have labored in that country have observed. Dr. Arthur Mouritz, in a report to the Board of Health, of Hawaii, dated Kalawao, Molokai, February 17th, 1886, writes as follows:

"The whole history of leprosy in the Hawaiian Islands, from its propagation to its present rapid spread and development, verily proves that it can only be accounted for by regarding it as a contagious disease. How any competent observer concludes that leprosy is non-contagious in these islands, is, to me, only accountable by presuming that previous views from extraneous sources have clouded his powers of observation. I repeat, on no other grounds can the spread of leprosy be explained in the Hawaiian Islands than by regarding the disease as contagious—not a theory of such, but a positive proof. Here we have the best field for observation. In the carelessness of the natives in disease generally, their hospitality to the leper and contempt of the disease, there is present here a typical illustration of the ominous remark of Dr. Tilbury Fox—such remark generally being accepted as correct—'that it is in those places where leprosy is on the increase that the freest intermingling of the leprous and non-leprous part of the community takes place.'" Further on in his report, and passing over much that is of great interest and value, we read: "That invariably, when no hereditary history of the disease is obtainable, I can always elicit the fact that contact with a leper for a long or short period had existed." I agree fully with the author when he says: "I do not think the importance of this evidence can be overrated."

It has long been the custom in Hawaii for people related to lepers sent to the leper settlement to accompany their afflicted relative or friend. Such people are called by the natives "kokuas." They go to the settlement with no trace of the disease, or are at least supposed to be healthy. That they come in contact with lepers in all stages of the disease is obvious. I cannot imagine a better field of study than is here presented. Granted that a man knows how and what to observe, his conclusions ought to be of the greatest value. I can assure you Dr. Mouritz was well suited for the task he undertook when he made this class at the settlement a study. I shall again quote from him:

"In the month of February, 1885, I made a medical inspection of all the kokuas residing at the settlement. The result was as follows: Total number male kokuas, 91; female, 87: total, 178. The male kokuas mostly accompanied their wives; the females their husbands. There were one or two cases where the father accompanied his son, and a mother her son or daughter, or an aunt a nephew or niece. Be the relation what it may, all these people were in contact with lepers continuously. In the month of August, 1885, I made another inspection, and in a few weeks time

I purpose doing so again. At the date of my writing this report (Feb. 17, 1886), twelve months after my first systematic inspection of the kokuas, the state of affairs is as follows: Number of male kokuas who have become lepers in the twelve months, February, 1885, to February, 1886, 5; female kokuas who have become lepers in the same period, 12; total, 17. So that out of a total of 178 healthy people in twelve months 9.5 per cent. have developed leprosy. Then, at the same rate of progress, in twenty years all these people will be lepers."

The doctor then goes on to say that such a state of affairs would not really come to pass, for a "small minority of the Hawaiian race are positively exempt from the disease," and I fully agree with him when he says "there is nothing remarkable in this statement." It is so with all contagious diseases.[1]

Dr. Mouritz's conclusions on this point are of interest. He says:

"If one hundred Hawaiians (sexes mixed) have continuous contact with leprosy for a period of years, say five to fifteen, at the expiration of that period no less than eighty-two would have become lepers, the remaining eighteen would be clean; and these latter are the class who are illustrations of leprosy being a non-contagious disease. I have come to the conclusion that about 18 per cent. of the Hawaiian race resist the contagion."

Regarding leprosy and syphilis, he says:

"There is no homology between leprosy and syphilis in my opinion, but there is an analogy. I affirm that any observer or physician who has studied visceral syphilis will speedily see where the diseases agree and where they do not; and those who only observe the external manifestations of syphilis will flounder among the many pitfalls which appear when least expected."

Another very interesting and valuable report, is that of Dr. Edward Arning, also made to the Board of Health of Hawaii, and dated November 14, 1885. The doctor made a special study of the disease at the islands, under the head of "Special Bacterial Research." He reports:

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[1] When I was a child I slept with my brothers who were ill of measles and did not contract the disease. I treated a good many cases when practising medicine years after, and passed through an epidemic one winter when it seemed there was no other disease in the county. Six months after, in the early summer, there was one case of measles in all the county round, and I was the sufferer. I had taken a ride in a stage with a man who looked ill and had a slight eruption on his face. I can not explain this, but I know measles to be a contagious disease, and the contagion was there in all the cases that did not affect me just as surely as in the one that did.

"In the so-called anesthetic cases the bacillus is not found in the anesthetic patches, nor in the chronic sores of necrotic parts of skin, tissue and bone; but, as nerve excisions have proved to me, in the nerves supplying these mutilated parts with vitality."

The doctor gives a very interesting account of his efforts to cultivate the germ in artificial soil, and his failures to do so; also of his failures to inoculate successfully different animals, such as rats, hogs, a monkey, and pigeons. The great interest of Dr. Arning's report centres on the case of Keanu. Keanu was condemned to suffer death, and agreed to permit Dr. Arning to inoculate him in consideration of having his sentence commuted to penal servitude for life. The doctor says:

"I commenced operations on the last day of September, 1884, after having previously made a most searching inquiry as to any leprous taint in his family, and a close examination of his own body. This examination satisfied me, as far as I am able to judge, that no trace of the disease could be found in him at the time. A further step was to insure that the prisoner would not be employed outside of the prison walls. As stated before, I inoculated Keanu on the 30th day of September, 1884, and for the four weeks following I saw him daily, and after that once a week for several months, a microscopic examination of the inoculation spot being made every time. After that period the convict has been examined by me regularly once or twice a month. The microscope revealed the presence of the bacillus lepræ in large numbers until the middle of March, 1885. They have since gradually diminished in number, but a recent excision of a small part of the scar shows them present even yet, nearly fourteen months after inoculation. At the same time there is nothing in the general appearance of the convict which would denote any development of leprosy. Pains in the joints of the inoculated arm from which Keanu suffered in January and February last, have since disappeared."

I can now state what Dr. Arning knows, and all the world should know. The convict Keanu has developed leprosy, and has the disease to-day. I have not seen him; but before leaving Honolulu I spoke of the case with a medical man who was perfectly familiar with all the facts, and learned that the disease had become fully declared in the inoculated arm, and that the man's condition was such that even a careless observer would pronounce him a leper at sight. This case will always stand alone. I suppose that no other man will ever be purposely inoculated with leprosy. The facts in the case that point toward the inoculation as having been the direct and only cause of the disease are many and strong.

Still they will be attacked by those who would rather maintain their own idea than discover the truth, and discussed by all who are seeking the gold in the dross by which the subject has been covered. There is another case on record that gathers strength and importance from the one just quoted, and lends a certain amount of strength to it. I refer to the case of accidental inoculation; reported by J. C. Taché,[1] M. D., of New Brunswick, Canada. He says:

> "There is a case, the facts of which are established beyond the possibility of cavil, in which the disease appears to me, as well as it did to those who witnessed it, to have been produced by the absorption of liquid matter discharged from the body of a woman who had been in a cachetic state from leprosy. At the funeral of that woman the body was carried on the shoulders of four strong young men. The day was hot, and on a sudden, liquid matter began to ooze out through a joint of the coffin, wetting the shoulder of one of the carriers. The wet, combined with the heat and the pressure of the sharp edge of the coffin, produced an abrasion of the skin of the young man. The contact of the liquid with the abraded surface lasted a part of the time of the procession and the whole length of the service, as it was only on his way home that the young man washed his sore shoulder and changed his clothing. Some months after, that man, whose health had always been robust, began to feel unwell. In a short time the symptoms of leprosy made their appearance, and he died of the disease eleven years after the occurrence. There had never been any case of leprosy in his family, whose ancestral genealogy is traced for several generations back; in fact, the disease was not yet known as leprosy, being of recent appearance in the locality and among these people. He was the fourth case in that place, the three others being the woman spoken of, the husband and sister of the woman, in the ancestry of whom there had never been any trace of the disease; the fifth case in that locality was the sister of the young man."

Every word of this is full of meaning, and yet it means nothing if not this: that the young man was inoculated from the dead body, and the others in some way from the living lepers. Another report from Dr. Arning[2] supports this in turn as it supports his own.

After stating the power of the germs of leprosy to resist putrefaction, he says: "A series of experiments in this line were commenced in October, 1884. Leprous tissue and matter was set aside under conditions of temperature and moisture most conducive to slow and thorough putrefaction, whilst the growth of the larger fungi was at the same time carefully excluded. From time to time a microscopic examination was made and the characteristic bacillus lepræ was not only found to hold its own against the germs of dissolution and putrefaction of albuminous matter, but met with so abundantly, and laden with spores, that the idea suggested itself there might be actual increase. An examination made a few days ago of the remains of this leprous tissue, set aside fully eight months ago, shows it to consist nearly entirely of swarms of the bacillus lepræ closely packed. Every vestige of the cellular and fibrous structure of the tissue has disappeared, even the bacteria of putrefaction have crumbled up into a mass of detritus, but the bacillus lepræ is there with all its peculiar micro-chemical reactions."

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[1] Leprosy in Foreign Countries.

[2] Appendix to the Report on Leprosy, 1886.

The doctor goes on to say that this fact led him to examine dead bodies of lepers to see what effect the ordinary decomposition had on the germ. The result was just what we might look for and expect. The germs were there after three months of interment. The doctor admits that he could not say that these germs were still potent for ill, or whether they were dead, but he felt personally confident that they were practically unchanged. Conversing with him on this subject, while he was still engaged in this part of his work, I well remember how emphatic he was on the danger of having these bodies contaminate the soil and possibly the water supply of a community. In his report he suggests filling up the coffins with quicklime as a safe and sure way of rendering the cadaver powerless to breed contagion.

The reports are so full of valuable information on the subject, that I have not noticed that I leave them unwillingly to pass on to my own observations of the disease during the four years that I lived on the island of Maui. The gentlemen I have quoted all had the best of opportunities to watch and study individual cases. The cases they were studying were where they could see them just as often as they pleased. It is very different on the other islands where there is no hospital or settlement for lepers. It is seldom that a leper desires to go away from his home to a hospital, and the study of his life after he knows himself to be a leper is, how to live with his friends and keep out of the way of those whose business it is to know all about him. I never before saw a place where people can hide so easily; the dense growth of ferns in the valleys and on the mountains, the vines on the foothills and the cactus that grows so abundantly on a large part of the island, afford a shelter that keeps them fairly secure as long as they seek it. They are quick to take an alarm, and a look from the government physician, an inquiry concerning their name, is enough to cause them to change their residence at once.

It is not an easy thing, therefore, for a district physician to give a complete history of cases. On the other hand, he has an opportunity to observe the general growth of the disease, that is of the best. He knows in a general way how many cases there are in his district, how many can be secured and sent away at any time and about how many cannot. He may not be able to name them nor always tell where they are, but he comes upon them in out of way places—when not looking for or expecting them. Indeed, he comes upon them everywhere, especially those who are only slightly affected.

My own experience with the disease can be briefly told. For about four years I was government physician at Wailuku, on the island of Maui. I had to look after lepers from time to time. The government took fits and starts of caring for and neglecting them. There were times when any word concerning them was most ungraciously received at Honolulu, while at other times, perhaps after the press had had a good deal to say, orders would be received to send all the lepers to the hospital for inspection. The work of segregation has, at no time, been faithfully carried out. A large number of the milder cases are not disturbed at all, and a good many others have been permitted to go free because of some influence, political or otherwise, that they may have possessed. The general belief on the islands is, that the disease is contagious. There are few thoughtful people there who differ greatly from Dr. Mouritz on this question. The older families, who have spent many years there, and have had good opportunities to observe how many of the native families pass away soon after one member becomes leprous, have no doubt on this point. They leave the how and the why to others to decide, but they would be blind not to see what deadly work is going on around them.

All over the island there are localities where the disease seems to have taken a particularly strong hold on the people. Whether or not this is really so is a question. I always imagined that in the out of the way places, where the white man is not likely to go, the cases were more numerous, because it was there the afflicted would seek shelter hoping not to be so often disturbed. Still when lepers were brought in from those places, they were, as a rule, found to be related, and their history is a warning more graphic than any other can be, but which the native will never heed. No Hawaiian ever turns a wayfarer from his door; no matter how little *poi* he may have, the stranger is welcome to a share of it. It may be the last pig or dog that is roasting in the earth, but wait until it is done and you can eat and welcome. Whether you are clean or a leper is not taken into consideration. If a leper is too closely looked after in one locality, he has only to go to another or to another island.

That the figures given regarding the number of lepers at Molokai, are correct, I have no doubt, but if one tries to estimate the total number of lepers in the kingdom by any of the published reports, he will be very far from correct. I have every reason to believe that there are at least four lepers not reported for every one that is. I do not mean by this that there are four with maimed hands or feet, or with distorted, hideous faces, but taking them all, from those who have only an anesthetic spot on some part of the body, to those who are not able to crawl from their huts or be moved, I am satisfied my estimate is none too large. One may see how the disease is affecting the children by visiting the schools. There were four or five in my district which I had to visit twice a year. Just as soon as a child was known to be a leper by his parents, he was kept at home and out of sight; perhaps he was sent to some other island or to some out of the way corner of the district. As there is no mistaking the tuberculous form of the disease, or the disease in any form when it is at all advanced, it follows that the anesthetic form in its first stage is all one will find there. I very seldom visited a school without excluding some, while the spots just beginning to show on others made it only too probable that they would not long be doubtful cases. It did not seem to me a difficult task to read the fate of Hawaii in the little dark faces that looked up from their books. An ear slightly enlarged, a spot on the face, a crooked hand, means more in that country than it would in this. True, every spot is not a sign of leprosy, and one tubercle does not make a leper. But one learns to know them only too well, and time too often proves the diagnosis correct.

Upon visiting a school it was my custom to ask the teacher if he suspected any of the pupils; if so, they were pointed out without drawing their attention to the fact. A general inspection was then made, and all those who showed any symptoms, together with a number of healthy ones, were taken apart. They were always very much scared and were quick to tell an untruth that would lead one astray. This was more especially the case in testing the sensation of a part. The only way, therefore, was to blindfold them and draw their attention to a part where sensation was not impaired by slightly pricking them with a pin; they would of course make an outcry, and tell where they were hurt, while with the other hand a pin could be thrust again and again deep into a part without their having any knowledge of the fact. Does this test made the diagnosis positive? Not always, as the child was scared, but they were good cases to look after, and they generally grew worse with time. I shall now give a brief history of some of the cases that came under my notice.

Jack, a bright boy, quick to learn, good-hearted and willing, was a servant of the teacher at Wailuku. As he often rode out with his teacher and was at times engaged about the house, he was closely examined at each visit. I noticed nothing wrong about the boy for a time, till one day I observed that his ears were slightly enlarged. I told Mr. J. not to have him about the house any longer; a little later he was excluded from school. He was promised a cure in a few months by a certain Dr. Gito (who flourished at Honolulu for a time), but it is needless to say that I had finally, at the end of about two years, to send him away with a lot of others, and I saw him no more. This was a case that was observed from the first symptoms till it was well advanced. His parents—that is, his reputed father and his mother—were sound. He did not inherit leprosy. Did he acquire it by contact? I think he did. He showed no sign of syphilis, though it is quite likely that his parents had been syphilitic at some period of their life, but for this I did not examine them.

Another very sad case was that of Johnnie T., a half white boy. He, too, was a bright boy and the pride of the teacher of the Wailuku school. He was reported as ill of a fever, and I was called to see him. I found him in a close, dark room, upstairs, over his father's blacksmith shop. I noticed that his mother was a very dark native, and that he had several brothers and sisters. I think there were four children in the family. He got over the fever in a few days so as to be about and came into my office. I noticed a suspicious spot on his face; he told me it had not been there long, but it worried him, and his father also took alarm. He went to Honolulu to consult a physician there, did not receive any encouragement, and grew gradually worse. His father left Wailuku and went to Hawaii. In about two years I heard from

Mr. T. Not only was the boy no better, but he (the father) was the only member of the family not a leper. Though I did not see them after they left Wailuku, I have every reason to believe the facts as reported correct.

Here the boy's father[1] was not a leper, the mother up to the time of their leaving Wailuku had not developed leprosy, none of the other children had leprosy. Did the boy contract leprosy from contact with a leper? I cannot say he did, but I know he had every opportunity to do so. I believe the other members of the family contracted the disease from him. Why the father did not contract the disease I cannot say; he may by this time have done so, but if he lives to be an old man and dies "clean," will that prove more than that he has resisted the disease? Does it prove that to the other members of the family it was not a contagious disease?

A few other cases will illustrate the peculiar traits of the people, if nothing else. A case was reported to me from Waihee, a man about forty-five years of age. I sent for him, and he came to my office. I asked him if he was all right; he assured me that he was, holding out his hands and slapping his breast and thighs vigorously to prove the fact. I told him to take off his boots. He had well-marked leprosy in his feet; he was reported, and asked leave of absence, and I was instructed to grant it if I thought best. I found he wanted the delay because of a Sunday school convention, soon to take place, at which he was going to entertain a number of strangers at his home, after that he would be ready to go. Need I say that my judgment was against this arrangement?

Mrs. S——, of Waikapu, married about eight months, and six months gone in pregnancy. Her husband would pass for a white man anywhere, and the woman was almost as fair. She was a well-marked leper; her face showing a good many tumors, and her hands and feet exhibiting unmistakable signs of the disease. Her sister was a still more pronounced leper than she, though younger, and Mrs. S. supposed that she had taken it from her. The husband asked permission to go to Molokai with his young wife, and I believe was allowed to do so. This is a very sad phase of Hawaiian life.

This same day I saw at Waikapu, in a small hut not more than ten by twelve feet, an old woman, helpless, nearly blind, and disfigured in a horrible manner. She lay on a pile of filthy mats; the one room of the hut was full of natives, and a young woman sat by the side of the old one's head, holding her partly in her lap, patting the poor old leprous face, and looking up at me as I entered with a searching, questioning look of sorrow, that asked me plainly, in its silent appeal, are you going to take this poor old woman away from us? I told them no, for I could not see how she could be moved. I left them happy; the old woman could only have lived for a few days. Is it any wonder that the plague grows and that the bride dies by the side of her grandmother?

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[1] I have no doubt, from the resemblance, that he *was* his father.

Minnie Schultz, of whom the San Francisco papers had so much to say some time ago, was from my district. She passed through the States on her way to Germany to receive treatment. One of her ancestors, on her mother's side, died at Molokai. No others of her family showed any marked signs of the disease up to the last I knew of them.

Syphilis has a deal to answer for: It was one of the first of the white man's gifts to the natives; it found a new soil, spread quickly, and has had its own effect in reducing the population. How much it has had to do, indirectly, with the spread of leprosy is a question upon which one might speculate, but how to draw conclusions is not quite so clear. Leprosy differs so materially from syphilis in its course and history that I do not see how they can be considered different stages of the same disorder. Indirectly, by lowering the resisting power of the individual, it may have some effect, but even here the theory is better than the facts observed. A great many of the lepers I have met were otherwise healthy, well developed subjects, many of them young; and, in spite of the disease strong, and active.

In an article on leprosy,[1] Dr. G. L. Fitch criticized a paper[2] by Dr. A. W. Saxe, who states as follows:

"The physicians of the Hawaiian Islands, long resident and of first class abilities and attainments, are nearly unanimous in the opinion that leprosy is of distinct and separate entity, having no other relation to syphilis than its occasional association with it; that it is contagious; that the mode of contagion is peculiar and unlike that of any other of the contagious diseases."

Dr. Fitch then states that Dr. Saxe could not have been well informed regarding the views of the medical men who sent a leper to Philadelphia with a letter of introduction to Dr. S. D. Gross and others. That Dr. Saxe *was* well informed, is shown by a card published in the *Hawaiian Gazette* of May 23d, 1883, a portion of which is as follows:

"We have read with pleasure the article of Dr. G. L. Mathes, in the *Saturday Press* of May 15th, in which he ably sets forth the difference between syphilis and leprosy, and in which he gives the views of the great pathologists and eminent medical investigators of the day. We cheerfully express our high appreciation of the article, and fully endorse the writer's views in regard to the non-identity of the two diseases. However, with a knowledge of the introduction and spread of leprosy among the people of these islands, we believe the disease to be eminently contagious.''

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[1] *Pacific Medical and Surgical Journal*, October, 1885.

[2] Transactions Medical Society State of California, 1883-4.

The card goes on to state that there is no known cure, and that segregation, however hard, is necessary. It is signed by Drs. G. Trousseau, J. S. McGrew, J. Brodie, N. B. Emerson and M. Hagan. Two of the signers are the gentlemen who gave the leper the letter of introduction to Dr. Gross.

Dr. Fitch publishes this card in full in his report, from which I have already quoted, but I think it cannot be too widely circulated. It should be read by all who are likely to see his paper. It is the testimony of men who have studied the disease in all its stages for years, and who ought to be authorities, as their opportunities have been very great.

I have seen four white men who were lepers, and know something of their histories. They were of the class who seem to make it a business to contract syphilis if they can, and leprosy if they must. These men certainly had leprosy, and just as surely did not have any marked signs of syphilis. They certainly did not inherit the disease; they were not born in Hawaii, nor where leprosy exists. Granting for a moment that they were all syphilitic, would they have developed leprosy if they had contracted their syphilis in any other land? Certainly not. Then it follows that this peculiar syphilis—that is to say leprosy—was transmitted to them by coming in personal contact, sexually or otherwise, with one suffering from a like disorder. Furthermore, from what I know of some cases where leprosy has developed in white people late in life, where no history of syphilis can be traced, I would conclude that this peculiar syphilis has a way of developing its fourth stage first, and in some well-marked cases going back and beginning over again. So that the fourth stage, well-marked, and making rapid progress, and a chancre not to be mistaken for anything else, may be seen in the same subject at the same time. Does this seem probable?

So far as a failure to inoculate a given number of native lepers with syphilitic virus has any bearing on the point, it may be taken rather as proof that they were syphilitics, and that it would have been just as impossible to inoculate any one of them had they been free from leprosy.[1]

I have given the opinion of Dr. Mouritz on this point. The card quoted above expresses the sentiments of most of the medical men of Hawaii. In the answers furnished the College of Physicians regarding this question, nearly all are in favor of the theory that makes the diseases distinct. It is the same in the answers furnished to the Hawaiian Government. They seem to me to be so plainly two separate diseases that I do not feel inclined to discuss the matter further. He who cares to do so, will find, I think, that any road he may choose to follow will lead him to a like conclusion. I may add, that leprosy is often mistaken for syphilis before the disease has fully declared itself; but time and the failure to obtain any benefit from specific treatment correct the error.

The population, at the time of Capt. Cook, was estimated at 400,000, it has fallen to about 40,000, and I believe it would be found below that figure if a reliable census could be taken. There were 652 lepers at the settlement on Molokai in 1866. As they have been more closely looked after of late, there must be many more at the present time. My estimate would make at least 3,000 lepers in the kingdom. This estimate is founded on my knowledge of the disease on the Island of Maui. A good many of these cases are centres of contagion and all will be, as they pass into the more advanced stages of the disease. This fact, the poverty that has come to the native since he has been induced to part with his land, their habit of crowding many people into small rooms, often with only the earth for a floor, their intemperance and the little thought they give to protect themselves from any evil, does not make the outlook a very cheerful one. I have seen a healthy woman ride up to a leper, about to leave the island, throw herself upon his neck and kiss his horribly swollen lips with more ardor then discretion. A people that will do this will pass from the face of the earth.

Incompetent men have played with the question of segregation from time to time, till the great opportunity has passed. I do not see how any government could successfully cope with the problem before Hawaii to-day. The question becomes a practical one to us when we consider that Hawaii is our next door neighbor, that her children often come to visit us, and that they are not always clean. Furthermore, our climate does not differ very greatly from theirs; we have a good many people about as filthy as many of the natives, and just as immoral. If leprosy is introduced here the only reason why it may not spread as in Hawaii, is, that all diseases take hold of a new people with greater force than where a certain toleration has been forming through the ages. Still, the white man does contract it; but for our comfort we can see that they are only those whose business or pleasure bring them in personal contact—the instances so far being two priests, a physician, and many libertines.

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[1] "The points were then allowed to dry, and in three hours after I transferred the virus to the arms of six leper girls, under 12 years of age * * The last time I used 14 points and inoculated 14 lepers therefrom, but no results followed in any of the twenty experiments."—*Pacific Medical and Surgical Journal*, 1885, page 544.

How to keep it out is an easier question than how to get rid of it. Both problems are easy enough to-day, if competent men go about it in the right way. The Hawaiians and the Chinese should be closely looked after; if found to be affected, they should be returned to their respective countries. My observation and experience would lead me to draw the following conclusions:

1. The history of the disease in Hawaii proves it to be contagious to the majority exposed; a few cases standing out against its influence, just as we find in other diseases where contagion is not questioned.

2. The leper may or may not have syphilis, but the diseases are distinct; he who has never had a sore may be far gone with leprosy contracted late in life; treatment that does so much for the syphilitic is powerless in the case of the leper.

3. Personal contact is not safe, as the disease may be transmitted thereby. Hawaii showing many examples where heredity cannot account for its presence. It follows that sexual contact is still more likely to infect.

4. Inoculation has been successfully performed, the convict Keanu being a leper.

5. The germs show great resistance to putrefaction and retain their power for ill for long periods, rendering inhumation unsafe.

6. Treatment of any kind has, so far, proved useless. Improvement which has been noted in many cases is only temporary.

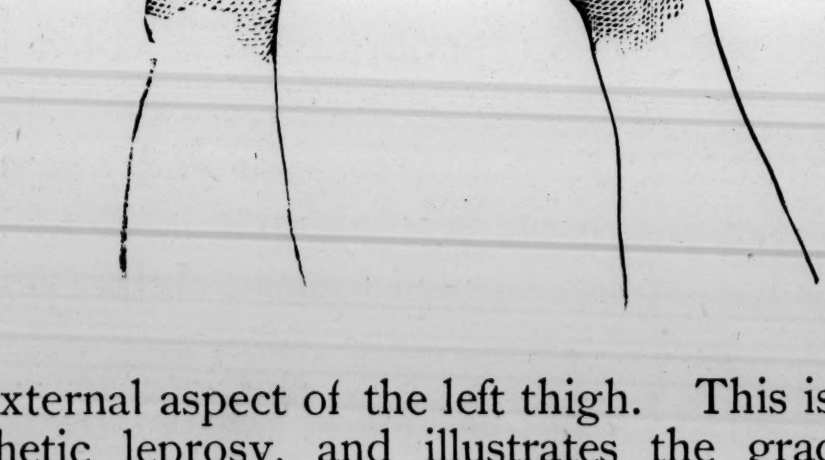
7. The only remedy is the early and absolute isolation of all cases.

8. Segregation has been but a partial check in Hawaii for the reason that only a part of those affected have been taken from their homes.

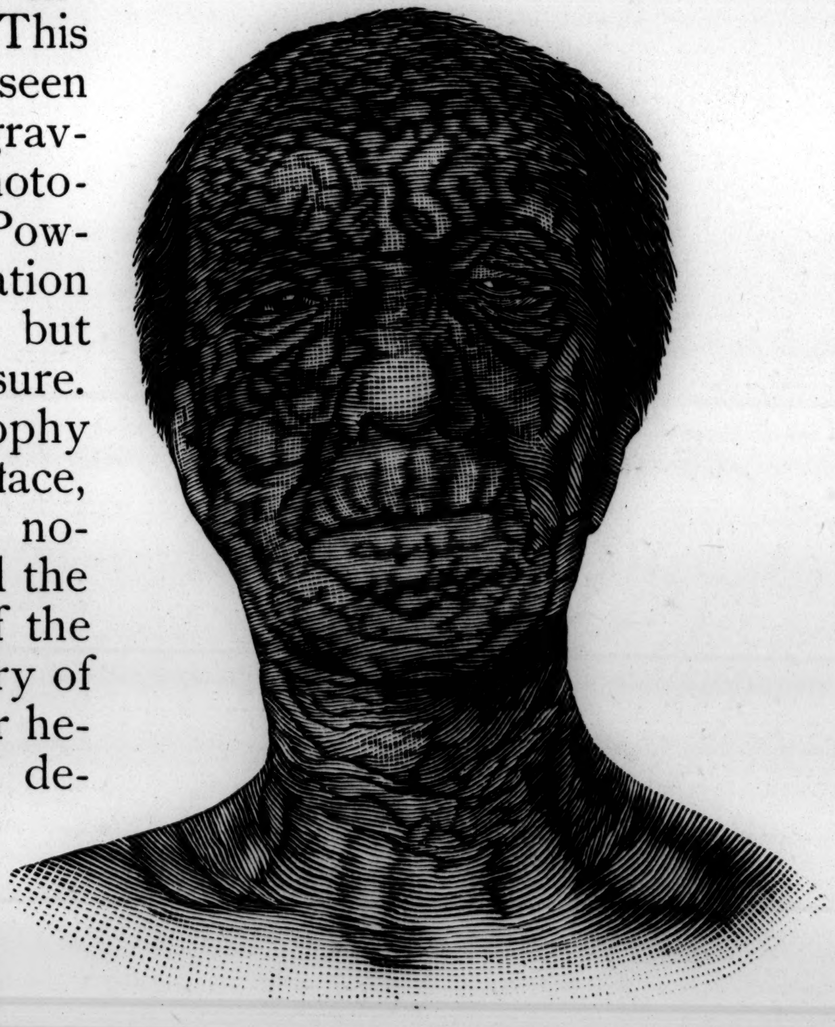
9. The doctrine of non-contagion has done a deal of harm and should be met with a prompt and earnest protest from those who know the facts as they are to-day. Free discussion will do much to dissipate this erroneous belief.

I shall now briefly report four cases, in all of which leprosy has developed when the subjects were residents of this State. With the exception of the first case, which might have been infected previous to arrival, it is obvious that all have contracted the disease from some source in California, unless we are willing to believe in its spontaneous origin.

Case I.—Hawaiian, aged about 40 years; occupation, fisherman. Came to California about eleven years ago, and was at that time free from any disease. Had formerly lived on the Island of Maui, district of Kula. His parents died non-lepers, and, so far as he knows, none of his brothers or sisters have developed leprosy. About nine years ago he first noticed the disease in his hands. The fingers gradually became contracted, the usual fissures at the flexures of the joints developing. The index finger of the right hand subsequently became so painful that he desired to have it amputated, and the operation was accordingly performed by Dr. W. R. Cluness. Since he was aware that he was a leper, he has rarely had connection with women, except occasionally a squaw. Has, up to February, 1889, resided in a small settlement of Hawaiians and Indians, on the Sacramento river. He states positively that none of these people have leprosy. At present both hands are badly contracted, so that he has almost lost the use of them. The condition of the hands can be seen in the accompanying engraving; the left thumb is so contracted that it appears as a stump. The toes are also becoming affected He has a well-marked macular eruption on the anterior and external aspect of the left thigh. This is a case of so-called anesthetic leprosy, and illustrates the gradual development of the disease.



Case II.—[1]J. O. C——, a mulatto, aged 60 years, a native of Richmond, Va. Has lived in California since 1852. The first symptoms of leprosy developed in the latter part of 1884. Previous to this time there was no marked evidence of ill-health, except an occasional feeling of languor and mental depression. But in October of that year, small, slightly elevated, dull red patches appeared on the extensor surface of the right arm, and later upon the body and lower extremities. Occasionally these discolorations would entirely disappear, leaving the skin perfectly smooth and apparently healthy; always returning, however, after a brief period, their color changing to a reddish-brown; slight hyperesthesia, but no pain accompanying them. This condition continued for nearly three years, the patient in the mean time being able to follow his occupation—that of barber—though his general health was somewhat impaired. In July, 1887, well-defined tubercular elevations appeared upon the face, body, arms and legs, varying in size from that of a small pea to a filbert—smooth and hard to the touch, and of a yellowish-red color. These are, at present, abundant on the forehead, eyebrows, cheeks, ears, lips and nose, causing great deformity of features. The lips are thickened, the ears stand out from the head and the nose broadened, giving a peculiar leonine expression to the face. [This condition can be plainly seen in the accompanying engraving, which is from a photograph procured by Dr. Powell]. There is some irritation and slight sensitiveness, but no pain, except on pressure. There is marked hypertrophy of the whole cutaneous surface, thick folds of skin being noticeable, especially around the neck and in the vicinity of the joints. There is no history of syphilis, either acquired or hereditary, and the patient declares that he has never suffered from syphilis in any form. The points of particular interest in the case are, that the patient has never resided out of the United States, has never visited a foreign country, has never been out of the State of California for 36 years, except a few months, 25 years ago, when visiting



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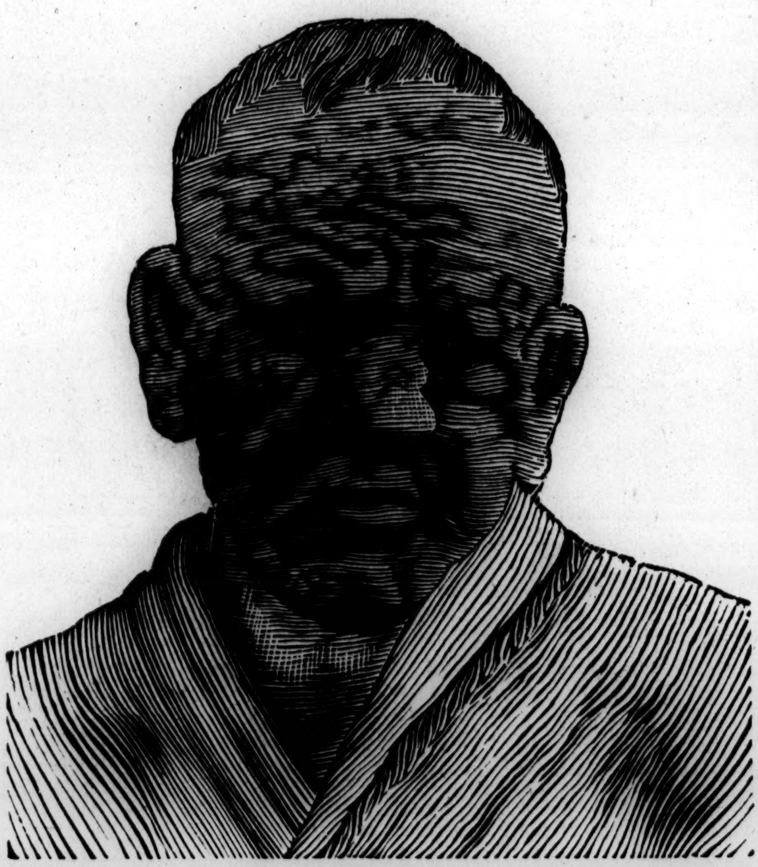
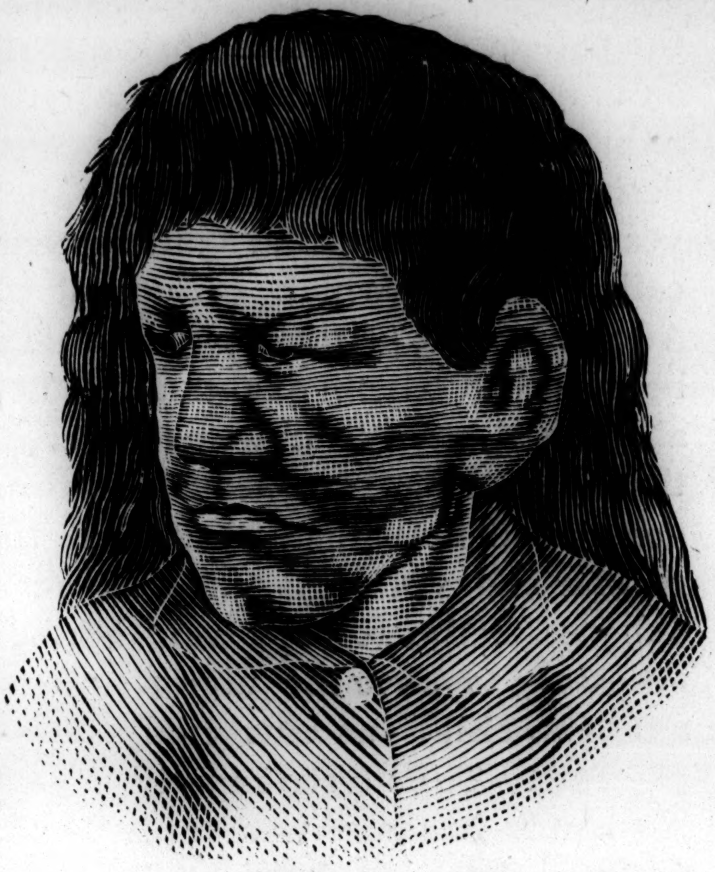
[1] Reported by Dr. David Powell, of Marysville, MEDICAL TIMES, Vol. II, p. 114.

relatives in the State of Ohio, and he has not been outside of the city of Marysville for the past 17 years. [This was undoubtedly a case of tuberculous leprosy. When the precise nature of the disease had been determined, the subject was promptly isolated, quarters being provided for him in a small building on the outskirts of the town. When aware of the character of the disease he determined to commit suicide, and after an ineffectual attempt, by opening the blood vessels in his arm, he finally succeeded, with the aid of laudanum, having first removed the dressings from the wounds and started the hemorrhage afresh.]

Case III.—Male adult, single, native of California, and has never been out of this state. No family history of syphilis or scrofula, nor of any kind of skin trouble. Sixteen years ago patient was quite healthy, but at that time had pimples all over the body. He then consulted several physicians, and has been treated for syphilis, but without benefit. He denies ever having had any venereal disease. He has never cohabited with Chinese, Indians or Hawaiians. When a boy, had been in the habit of playing with some young Hawaiians. Never remembers having seen any one with a similar disease, and does not know how he contracted it. His present condition is well shown by the accompanying engraving. The case is one of tuberculous leprosy. The disease shows very plainly about the face, which is greatly disfigured. The ears, nose and lips are enlarged and thickened. The hands are not so disfigured as in *Case I*, but the fingers are clubbed and there are ulcers on the posterior surface. One foot is "sore," so that he finds it more comfortable to wear a shoe cut open on the top. His voice is croaking, and at times he is troubled with diarrhea. His appetite and digestion are apparently good, and he sleeps well. His breathing is short and he "takes cold" easily. He does not at present suffer much pain, but says he did during the earlier stages of the disease.



Case IV.—Boy, native of California, never been out of this State, no family history of any constitutional disease. Was well until about eight years ago; was then vaccinated. The arm became very sore and was swollen for its entire length. An abscess formed in the axilla, and subsequently broke, discharging pus freely. Recovery ensued, the arm becoming well again. Soon after it was noticed that there were numerous patches of "ringworm"[1] on the body; this condition continued for several months. Several persons, himself included, were vaccinated by the father directly from the boy. The father and one other of the persons vaccinated subsequently had "ringworm." The father has since had "tetter" from time to time. One year after vaccination the boy's ears became slightly enlarged. The nose was noticed to have become broadened and tubercles formed on it, and on other parts of the face. The accompanying engraving will give some idea of the condition of the face and shows the peculiar and characteristic expression of the leper. The ears are markedly enlarged, the nose broadened and the alæ are thickened and studded with tubercles. The lips are also thickened. The hands show the disease quite plainly, the fingers being clubbed. There are a few small ulcers. There is a sore on one shoulder. The feet are beginning to be affected. The voice is not altered. He eats and sleeps well and does a certain amount of physical work each day. So far, no positive source of contagion has been ascertained.



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[1] "Those acquainted with the affection can hardly confound it with any other disease. It is, however, frequently mistaken, before anesthesia or trophic changes ensue, for syphilis. Leucoderma and ringworm in the dark skinned are perhaps most likely to be confounded with the macular forms."—Fox, *Epitome of Skin Diseases.*

DEPARTMENTS.

OBSTETRICS, GYNECOLOGY AND PEDIATRICS.

By WALLACE A. BRIGGS, M. D., Sacramento, Cal.

Ingluvin in the Vomiting of Pregnancy.—DR. POPP (*Pester med. Presse*, No. 40, 1888) reports having achieved considerable success with ingluvin in the vomiting of pregnancy. Having a very obstinate case, upon which he had exhausted the entire resources of the pharmacopeia, he administered three times daily, one-half hour before meal time, eight grains of ingluvin, and directly afterward two tablespoonfuls of a one per cent. hydrochloric acid solution. An improvement was observed after a few doses had been taken, and a cure effected after the treatment had been continued for three weeks.—*Medical News.*

Hernia of the Parturient Uterus Through the Linea Alba.—DR. CHAS. E. HAGNER reports an interesting case of this condition in the *Journal of the American Medical Association* of March 2d, 1889. He had attended Mrs. B. in her two previous confinements. The first labor was prolonged; forceps were used and a slight laceration of the perineum was produced, which was immediately united. Two years later patient was again delivered after a short and perfectly normal labor. Within three months the patient called the doctor's attention to a "lump," which proved to be an umbilical intestinal hernia about the size of an egg, which was readily reduced. An abdominal truss was ordered, which she wore with the desired result till she was taken in labor with her third child, about two years after her second confinement. Four hours after the doctor was called, during which period labor progressed normally and actively. After a violent pain the patient said she was tired out and could no longer bear down. Upon examination he found that the uterus had left the abdominal cavity, and was covered only by the skin, which was very tightly stretched, and seemed as thin as tissue paper. The head was well down, and notwithstanding that the uterine contractions were strong, regular and visible, it made no advance. As the patient was becoming exhausted, the forceps were applied and the child delivered. It was necessary to have the uterus supported in proper position by the nurse until the child was extracted. The hand was introduced to remove the placenta. The uterus rapidly contracted to its normal size and position. A suitable bandage was applied and the woman made a good recovery. Six months after delivery the doctor was surprised to find so small an opening in the abdominal walls. She has worn the abdominal bandage which was applied previous to the last pregnancy.

The Prevention of Summer Diarrhea Among Infants.—DR. L. EMMETT HOLT discusses (*Medical News*, February 23d, 1889) the relation which summer diarrhea bears to the dyspeptic intestinal catarrh of infancy. These latter lesions, he says, are commonly looked upon as functional in character, but are of importance in their relation to severer forms of disease, particularly entero-colitis. The author's examination of the intestines of patients dying from other diseases, usually pneumonia, convinced him that a dyspeptic intestinal catarrh produces, when allowed to run on, marked alterations in the walls of the intestines. Microscopical examination of these cases revealed slight catarrhal changes, but the important feature was the great enlargement of the solitary follicles. This may be justifiably regarded as identical with the first stage of the ulcerative process. The swelling in both cases is most likely due to the same cause—the absorption of ptomaines produced by the intestinal decomposition. The doctor's observation has taught him the importance of the early recognition and intelligent treatment of all forms of dyspeptic catarrh as prophylactic treatment of entero-colitis. This must be secured by proper digestion, which depends chiefly on proper feeding. It is all important to see that infant's food is pure and free from germs. Another common danger is from over-feeding. He formulates the following conclusions: (1.) Children should not be overfed at any time, but especially not in summer. (2.) At this season, also, every dyspeptic catarrh should be attended to; many of these are promptly curable by merely clearing out the intestine and cutting down the quantity of food. (3.) Should an intestinal catarrh, even a very mild one, continue for three weeks, one may be pretty certain that he has something more than a functional disorder to deal with. (4.) Every mild catarrh should be looked upon as the possible precursor of a severe type of intestinal disease, either near or remote. (5.) In treatment of all diarrheal diseases it should be borne in mind that there is something more to be considered than the bacteria and the products of decomposition, viz.: the anatomical changes.

SURGERY.

By T. W. HUNTINGTON, B. A., M. D., Surgeon Southern Pacific Company's Hospital, Sacramento, Cal., and J. F. MORSE, M. D., Surgeon German Hospital, San Francisco, Cal.

Thomas's Operation for Benign Mammary Tumors.—This operation is specially commended, in that it entails a minimum of mutilation. The incision is made along the curved groove formed below the breast, where it hangs against the thorax (this being marked while the patient is in the erect position). The gland is very readily turned up from the muscle, and the tumor removed from its lower surface by a radial incision. The proceeding is very simple, and any part of the breast can be reached by such plan. The weight of the breast obliterates the cavity, and the drainage tube may be removed on the second day. Primary union is the rule, and the cicatrix is wholly concealed.—JOHN DAVEY HAYWARD, M. D., *British Medical Journal.*

Fracture and Refracture of Patella—Treatment by Wiring the Fragments in each Instance.—DR. CHARLES F. PICKERING reports (*British Medical Journal*)) the following interesting case: Patient, aged 29, fractured his right patella by muscular action. One week later the fragments were wired by the usual method. The case presented an impediment to non-operative cure, common to its class, viz, the folding in of the aponeurosis of the extensor tendon over the fractured ends, thus entirely preventing perfect apposition. Recovery perfect. Patient left his bed twenty days after operation, wearing a Croft's splint; eight days later splint was removed and he was discharged with fairly good movement in the joint.. Four months later the affected knee was in no way inferior to its mate. Nine months after the operation, while sparring with a fellow-workman, the same patella was refractured by muscular action. Three days later an operation, similar to the first was done. The fracture was found to be a perfectly fresh one, the line being about one-half inch below the former one. The wire of the first operation was broken and the ends drawn out of the upper fragment. The wire for the second was of much larger calibre than for the first operation, it being about the size of a No. 1 English catheter. The result under antiseptic dressings was again perfect. He was discharged at the end of a month, wearing a Croft's splint. By means of passive motion the joint was wholly restored in four months. The wire is still *in situ*. Dr. Pickering, in reviewing the operation, says, we must ask if the results are better than in the non-operative plan.

In my experience, I am certain that there is no comparison in the results of the two methods. I have operated three times successfully, and without complications or dangerous symptoms. The next question is whether the operation is a safe one. This depends wholly on the operator, and not on the operation. Unless the operator can conduct any antiseptic case with certainty, he is not justified in operating. With perfect asepticism there is immunity from danger. Inasmuch as the intervening fibrous aponeurosis prevents bony union under the non-operative plan, while, as shown in this case, bony union can be obtained by wiring, there cannot be much difficulty in deciding which is the proper procedure. In rapidity of cure, the wiring operation is more successful. My patients have walked in less than four weeks without support of crutch or splint, and within five months the joint has been perfect in movement and utility.

Incision and Drainage in Cerebral Abscess.—PROFESSOR VON BERGMANN showed a patient to the Berlin Medical Society, December 5, in whom a cerebral abscess had been successfully opened and drained. The man, who had suffered from otorrhea for eleven years, on admission to the hospital had fever and shivering, with headache and slowing of the pulse to fifty-three. Right facial paresis with partial left hemiplegia came on, and a diagnosis of abscess of the left temporo-sphenoidal lobe was made. The skull was freely opened, the dura mater incised and brain exposed. Von Bergmann incised the brain, and on the third incision found pus, which was green and foul. A drainage tube was introduced and the wound dressed with iodoform gauze. In three weeks the abscess cavity was entirely closed. The patient made a good recovery.—*British Medical Journal*, Dec. 22, 1888.

Treatment of Fracture of the Patella by a Subcutaneous Silk Ligature.—At a recent meeting of the New York Surgical Society, DR. LEWIS A. STIMSON showed two patients with recent fracture of the patella, treated by subcutaneous silk ligature. During the past two months he has thus treated five patients with recent fractures, the two presented being the first and third of the series. The second had been discharged cured; the fourth and fifth were still under treatment and doing well. The operation consists in passing a silk ligature through punctures made in the skin, through the quadriceps tendon and the ligamentum patellæ, and under the skin in front of the patella, in such a manner that, by drawing the ligature tightly, the two fragments of bone were closely approximated. He employed a long, half-curved Hagedorn's needle and a stout braided silk ligature. The four punctures were made, so to speak, at the four corners of the patella. The needle was entered at the lower right-hand corner, carried through the ligamentum patellæ, across and out through the opposite puncture. This made a loop through the lower tendon. Then the needle was entered beneath the skin, at its recent point of exit, and carried upward between the skin and the front of the patella and brought out at the upper puncture on the same side. It was then reëntered and passed beneath the quadriceps tendon to the opposite puncture, thus making a loop through the upper tendon. The needle was then passed beneath the skin to the original point of departure. The fragments were then closely approximated, the ligature tied tightly, and the ends cut short. The punctures were then closed by a single suture. The ligature must pass close to the bone above and below, to avoid its becoming slack by cutting through soft tissues. A simple posterior splint was applied. This method is to be recommended, not only because of its own merits, but also because it was an efficient and apparently much less dangerous substitute for open arthrotomy and metallic suture, a method which, though almost entirely abandoned in Europe, was still having numerous victims in America. The speaker knew of three cases, unreported, that had occurred during the past summer in New York hospitals, where, after that operation, the joint had suppurated, amputation had become necessary and death ensued.—*New York Medical Journal.* [Admitting the presence of an aponeurotic curtain between the fragments, as certainly occurs in many cases, this method seems scarcely more efficient than several non-operative plans.—H.]

OPHTHALMOLOGY, OTOLOGY AND LARYNGOLOGY.

By WM. ELLERY BRIGGS, M.D., Sacramento, Cal.

The Treatment of Ophthalmia Neonatorum and Blenorrheal Ophthalmia.—At a recent meeting of the Société des Sciences Médicales de Lyon, DR. GRANDCLÉMENT reported his method of treatment in these diseases. He believes that with our knowledge of their bacteriological origin we can prescribe a course of treatment which is quite certain to rapidly cure the patients. When a case of gonorrheal ophthalmia is recognized by the usual symptoms and by the presence of gonococci, we should proceed without loss of time—first, to cauterize the conjunctival mucous membrane every twelve hours with a ten-grain to the ounce solution of nitrate of silver; secondly, to thoroughly irrigate the conjunctival *cul-de-sac* with a 1:1000 bichloride solution every hour. Since he has used these two remedies promptly, constantly and regularly, purulent ophthalmia has not been regarded with such dread as it had previously been, as he considers its cure as quite certain and complete. Before deciding upon this method Dr. Grandclément ascertained from the researches of Kreiss what was the most destructive agent to the gonococci. He found that of the various agents these two were the only ones that prevented the generation of the germs. Carbolic and salicylic acid and many other antiseptics, only partially arrested the multiplication of the gonococci. The author advises the use of both remedies in gonorrheal ophthalmia, as the nitrate of silver appears to penetrate the tissues and destroy the germs more deeply than the sublimate solution. The fact that about one-sixth of the 3,500 blind people in France are brought to this condition through neglected purulent ophthalmia, makes it imperative that every case should be promptly and thoroughly treated.—*Lyon Médical*, February 17, 1889.

Treatment of Ulcerous Blepharitis.—DR. A. TROUSSEAU recommends thorough cleansing of the cilia, removing all crusts, and the application of compresses wet in phenic acid and water (2.5:350). These applications should be made with a warm solution, and two or three times daily for half an hour at a time. When the lids have been sufficiently cleansed and disinfected the ulcerations should be touched with the solid nitrate of silver, or with a solution of the same (1:75). If the ulcers are indolent they may be stimulated with tincture of iodine. In a large number of cases it is useful to extract the cilia. After cicatrization sub-acetate of lead solution can be applied night and morning, and at night an ointment of the red precipitate.—*Union Médical*, February 12, 1889.

Recent Advances in the Treatment of Obstruction of the Nose.—At a meeting of the Harverian Society, Dr. SCANES SPICER called attention to the clinical association between abnormal conditions of the nasal fossæ and walls, and many persistent functional derangements of the nervous system, such as depression, hypochondriasis, drowsiness, lassitude, inability to keep the attention fixed, as well as neuralgia, headache, paroxysmal sneezing and asthma. He said that the galvano-cautery was to be preferred to chromic acid for reducing inferior turbinated hypertrophies, because of the rapidity of the method and its freedom from injuring the overlying ciliated epithelium, which it is important to preserve. The galvano-cautery point should therefore be plunged into the spot requiring reduction, and run along under the mucosa. For middle turbinated hypertrophies he prefers chromic acid applied on a carrier to the exact spot required, under good illumination. This preference is based on its shrinking effect upon the tissues, so desirable here, where, on account of proximity to other structures, there is danger of adhesions taking place. The author especially insisted on the importance of careful and long-continued treatment of the parts exposed by removal of nasal polypi to diminish their tendency to recur. He advocates the use of the snare for removal of polypi, and condemns the forceps as inexact and dangerous. The necessity of securing absolute and permanent freedom from fetid and adherent crusts obstructing the upper air channels, in cases of ozena before any real improvement of the condition could be expected was insisted on, for otherwise the usual applications never reach the diseased parts. The treatment of bony and cartilaginous outgrowths of the septem by the electro-motor trephine was described. It was stated to be the least painful, quickest and safest way of removing these obstructions.—*Medical Press and Circular*, February 13. 1889.

DERMATOLOGY AND VENEREAL DISEASES.

By G. L. SIMMONS, JR., M.D., Sacramento, Cal.
And D. W. MONTGOMERY, M.D., Professor of Pathology, University of California, San Francisco.

Hemiatrophia Facialis.—In 1880, VIRCHOW brought two cases of this rare disease before the Berlin Medical Society One of the patients, a woman of fifty years of age, had suffered after childbirth twenty-five years before, from facial erysipelas, which was followed by pain in the left side of the face and in the left arm. About a year afterwards (the pain having entirely subsided in the meantime), she noticed that the left side of the face was sunken. Virchow was of the opinion that the atrophy was not owing to disturbance of the vasomotor nerves, because there was no abnormal condition of the vessels, and irritants which when applied to the skin cause reddening, produced their usual effects in this case. The facial nerve could not be looked upon as the cause of the trouble, because there was no paralysis of the muscles supplied by it. The most marked atrophy, however, was in the distribution of the branches of the trigeminus, and so the trophic disturbances observed were ascribed to this origin. MENDEL has now had an opportunity of examining *post-mortem* the anatomical substratum of this interesting disease in this case. He found a neuritis interstitialis prolifera of all three branches of the trigeminus on the left side. On the corresponding side of the brain there was atrophy and partial disappearance of the descending root of the fifth nerve, with a decrease in volume of the substantia ferruginea on the floor of the fourth ventricle. Mendel was of the opinion from this case that the descending root of the fifth was the trophic division of the nerve. In support of this view he adduced the fact that in almost all cases there were no disturbances of sensation or motion which would necessarily follow if all the functions of the fifth nerve were interfered with. RUHEMANN reports a case in the *Centralblatt f. klinische Medicin*, No. 1, 1889, supporting from a clinical point of view the relationship of the trigeminus to unilateral atrophy of the face. The atrophy was not, in all probability, connected with the seventh nerve, because there were no paralyses nor changes in the electrical reactions of the muscles supplied by it. It did not seem likely to be dependent on a lesion of the sympathetic, because those signs which are due to paralysis or irritation of that system as sinking in of the bulbus oculi, changes in the secretion of the sweat, salivary or lachrymal glands, tachycardia, angio-paralytic, angiospastic, or oculo-pupillary phenomena were not present. The atrophy was therefore referred to the trigeminus. The etiology in this case also bears a similarity to that of Virchow and Mendel. There the atrophy followed an attack of erysipelas of the face acquired after parturition. In this case the patient first had an inflammation of the lower jaw, causing the loss of four sound teeth, and a portion of the bone was removed, after which he noticed a loss of sensation on the same side of the face. Many other cases have also been observed to come on after disease or ulceration of the teeth. This makes the eighty-ninth recorded case of this disease. [Considering its rarity, the number of observations of this affection is rapidly increasing. A short time ago STRUMPELL, in his text-book on medicine, said there were only thirty cases on record; now we have eighty-nine, and one *post-mortem* examination. The disease is highly interesting on account of its connection with morphœa and scleroderma.—D. W. M.]

Lupus of Mucous Membranes.—DR. MAX BENDER has shown that lupus of the mucous membranes is not at all such a rare affection as it has hitherto been regarded. It occurred in 173 cases out of the 380 lupus patients examined during the last six years in Doutrelepont's Clinic for skin diseases in Bonn, that is in 45.5 per cent. He urges the necessity of examining the mucous membranes of patients suffering from lupus. In only 147 cases out of the 380 could the point where the lupus commenced be fixed with any degree of certainty, and it was found that out of these 147 cases the disease *began* on mucous surfaces in 46 cases. In the remaining 101 cases the patients clearly stated that the skin was the starting point of the affection, but the uncertainty of relying on the mere assertions of the patients was shown; because some of them, when told they were suffering from the same disease in the nose that they had on the skin, and even that it had destroyed the whole nasal cartilages, were greatly surprised. Of the mucous membranes, that of the nose was most frequently affected, there being 115 cases, or 30.3 per cent. of all the cases examined. The disease was also observed on the mucous membrane of the conjunctiva, lachrymal duct, lips, gums, tongue, larynx and external genitals. Only six patients out of the entire 173 suffering from lupus of the mucous membranes did *not* exhibit a coincident lupus of the skin.—*Vierteljahresschrift f. Dermatologie und Syphilis*, Heft. 6, 1888.

MATERIA MEDICA AND THERAPEUTICS.

By WM. WATT KERR, M. A., M. B., C. M., Professor of Clinical Medicine, University of California, San Francisco.

The Relative Value of Opium, Morphine and Codeine in Diabetes Mellitus.—The *British Medical Journal*, of January 19, 1889, contains a very interesting and instructive article upon this subject, by DR. T. R. FRASER, of which the following is a summary: Since Pavy's recommendation of codeine in the treatment of diabetes mellitus, the drug has been used in this disease almost to the entire exclusion of opium and morphine. At the same time there are no pharmacological data to warrant this preference, as investigation shows codeine in its most important actions to be identical with weak morphine, and chemical analysis reveals the fact that in chemical structure it differs from morphine only in containing methyl. In short, codeine is morphine diluted by the addition to it of the relatively inactive substance, methyl. These considerations impelled Prof. Fraser to make some observations for the purpose of comparing the effects of codeine with those of opium and morphine in the treatment of diabetes mellitus. A patient suffering from diabetes mellitus was selected as a fit subject, and the observations were carried out in the following manner: The general plan followed was to allow the patient ordinary diet for one period; then to adopt a carefully restricted diet; then this diet with codeine, in doses varying from half a grain to five grains, thrice daily, and for a short time with one-sixtieth and one-thirtieth of a grain of sulphate of atropine thrice daily; then restricted diet alone; then restricted diet, first with opium alone, in doses of half a grain to one grain and a half, and afterwards with opium and sulphate of atropine; and finally, restricted diet with hydrochlorate of morphine. The results were: (1.) The case was one in which simple dietetic treatment had not the usual beneficial effects. (2.) The addition of nine grains of codeine to the restricted diet, lessened by about one-third, and of fifteen grains of codeine in the day by about one-half, the quantity of fluid drunk, and the quantity of urine, sugar and urea, and it slightly reduced the specific gravity of the urine. (3.) The addition of atropine to the codeine caused a still further reduction. (4.) After the administration of codeine had been stopped, an interval of six days on restricted diet, without any medicinal treatment, was not sufficient for a deterioration to occur to the special symptoms of the disease as they existed before codeine had been given; but the general health was not improved during this interval of simple restricted diet; indeed, it became worse and hastened the return to medicinal treatment. (5.) The subsequent administration of half a grain of opium three times daily produced a considerable reduction. With one grain of opium thrice daily the reduction was to less than one-half, when contrasted with the amounts during a restricted diet alone, and before any medicinal treatment had been adopted. One grain and a half, thrice daily, produced a further reduction; and when to it was added one-twentieth of a grain daily of sulphate of atropine a still further reduction occurred. (6.) Restricted diet, with one-third of a grain of hydrochlorate of morphine thrice daily also produced a marked reduction. While this small quantity of morphine was being taken, the fluids drunk by the patient were only one-third, the urine and sugar less than one-half, and the urea about one-half of the amount during restricted diet alone, before medicinal treatment had been commenced. These averages seem to show that under a daily administration of one grain of hydrochlorate of morphine, the quantity of fluids drunk, and of urine, urea and sugar voided, was rather less than when three grains of opium and decidedly less than when fifteen grains of codeine were being taken. In three other cases in which a similar comparison was instituted, morphine again showed a marked, though not so great a superiority over codeine.

The Value of Some New Drugs.—DR. GOODHART, of Guy's Hospital, reports his experience (*British Medical Journal*, January 19, 1889,) with a few of the more recent remedies which have been added to the physician's armamentarium. Paraldehyde he found to be unreliable as a hypnotic, but very useful in the restlessness and cardiac asthma so often seen in aortic disease, and in the laboring dilated heart of chronic Bright's disease. In the treatment of renal headache it was frequently successful, although not equal to nitro-glycerine, which is more generally used for this purpose. Another class of cases in which its administration was followed by the most satisfactory results, was in relieving alcoholic delirium and the somewhat kindred delirium which occasionally occurs after a prolonged attack of typhoid fever. In all these conditions paraldehyde was given in half drachm doses, with syrup of orange as an excipient. Urethan, in his hands, proved to be the best hypnotic introduced since chloral. His custom was to give fifteen grain doses in water. Pilocarpine, in addition to the benefit derived from its diaphoretic properties in cases of dropsy and uremia, was very efficacious in relieving the itching which is so distressing a symptom in jaundice. The remedy was tried in six different cases, and each time with the most satisfactory results. The method was to inject one-third of a grain subcutaneously, this quantity being sufficient to afford relief for three or four days. It was also used with success in relieving the lightening pains of locomotor ataxia. Although antipyrine has been used in a very large number of diseases, the weight of clinical evidence seems to indicate that it is best adapted to that form of disturbance which may be designated "paroxysmal neuroses." The results attained in the treatment of chorea, whooping-cough, migraine, and other forms of neuralgias, all tend to corroborate this idea, and it is highly probable that its antipyretic effects may be also attributed to an influence on the nervous centres.

MEDICINE AND PATHOLOGY.

By ALBERT ABRAMS, M. D., Demonstrator of Pathology, Cooper Medical College, San Francisco, Cal.

Physiological Heart Murmurs.—DR. MORTON PRINCE recently read a paper before the Boston Society for Medical Improvement, which is of great interest. He emphasizes the important fact that cardiac murmurs are not always indicative of organic disease. He has studied the cardiac phenomena in 86 consecutive applicants for positions in the Boston fire department. After eliminating nine cases, in which symptoms indicated organic heart disease, there remained 77 presumably healthy individuals. Of these a systolic murmur, with all the characteristics of a mitral regurgitant lesion, could be heard in 26 cases. He was careful to confirm the accuracy of these observations, and requested Dr. McCollom to note the frequency of similar murmurs amongst applicants for the police department. The latter had found 27 mitral regurgitant murmurs in 200 presumably healthy men. Dr. Prince infers from this evidence that the murmurs must be physiological—not pathological; some of them might be cardio-respiratory, but the greater number could not be explained by this hypothesis. After tabulating the coëxisting phenomena, it was found that while there seemed to be no relation between the pulse rate and the existence of the murmur, it was found that of 42 cases in which the strength of the heart's action was recorded, it was above the normal in 29 and natural in 13, as follows:

$$29\begin{cases}\text{Souffle in 19.}\\\text{None in 10.}\end{cases}\qquad 13\begin{cases}\text{Souffle in 1.}\\\text{None in 12.}\end{cases}$$

Taking the converse of this, of the 20 cases with mitral systolic murmurs, the heart's action was recorded as above the normal in 19, and as natural in only one. In explanation of these murmurs, the mechanism of the mitral valve was considered. The mitral opening is much larger in diastole than in systole, and two actions were necessary in closing the ostium: (1) The sphincter action of the muscular fibres surrounding the opening; and (2) the approximation of the valvular segments. If the tone of the sphincter were impaired, regurgitation occurred, owing to the valves being too small to fill the orifice. The following explanation was offered to explain the murmurs described in the paper: Given a normal sphincter, but with excessive pumping action on the part of the heart, under strong nervous excitement, a temporary leakage might occur from the blood being forced through the sphincter in spite of the action of the latter.—*Boston Medical and Surgical Journal*, Jan. 31, 1889.

The Treatment of Fibrinous Pneumonia.—As yet we have no remedy which possesses a specific action on the disease, and we do not treat the pneumonia, but the patient; consequently the therapy is purely expective and symptomatic. A typical pneumonia is clinically characterized by a sudden rise of temperature in the beginning, moderate continuous fever, then a sudden fall of temperature in from four to seven days; furthermore by the rapid development of hepatization, which is usually demonstrable after 12 to 36 hours, and finally by a relatively favorable course. The atypical or asthenic form of pneumonia, also known as bilious and malignant pneumonia, is usually preceded by a prodromal period of some days' duration. The temperature slowly attains its maximum, and the course of the affection is interrupted by complications, notably cerebral. There are three cardinal points demanding the earnest attention of the physician in cases of pneumonia: the general infection, cardiac involvement, and pulmonary insufficiency. Nothing can be done directly in combatting the general infection as well as the lung infiltration; but we may antagonize the pyrexia, which possesses a paralytic action on the heart, and sustain the functions of the latter organ. The first indication is accomplished by the antipyretic treatment, the second by the stimulating treatment. Clinical experience has taught that a moderately high temperature is not always a signal of danger; but rather that fever is a curative agent of nature, conducing to the destruction of pathogenic microbes. In order to reduce hyperpyrexia we can have recourse to cold baths so successfully employed by German clinicians. For a rapid reduction of temperature antipyrin in xv gr. hourly doses, until a sufficient remission of fever has occurred, may be successfully employed. Antifebrin in iv gr. hourly doses is similar in action. The stimulating treatment consists in the administration of alcohol. Alcohol is an economic remedy, limiting by its action the general tissue metamorphosis. It is also, owing to its oxidation in the economy, of some nutritious value, particularly when the ingestion of food for any reason is interfered with. Alcohol, administered in proper amount and concentration, is one of the most active excitants of the heart, and with it the heart may be sustained in its activity, until the disease has run its course. Individuals addicted to alcohol must receive large quantities from the incipiency of the affection. Other excitants may be employed, such as camphor, ether and musk. Inhalations of oxygen may be employed, especially in old people, at times with success. If ordinary stimulation does not thwart a supervening lung edema, then blood letting constitutes the only measure which will prolong life. An abstraction of about 8 ozs. will usually suffice to relieve a passive dilatation of the right ventricle, in order to secure more thorough cardiac contractions. Cerebral complications are better combated by antipyretics than by blood letting. All, then, that is necessary for the treatment of pneumonia, is good nursing, nutrition and fresh air, alcohol in moderation. As antipyretics, when necessary, antipyrin and quinine. In heart failure, musk, and in pulmonary edema, blood letting.—DR. WEBER, in *Medicinische Monatschrift*, February, 1889.

MENTAL DISEASES AND MEDICAL JURISPRUDENCE.

By W. H. MAYS, M. D.; Professor of Mental Diseases and Medical Jurisprudence, University of California, San Francisco.

The Forceps as a Cause of Idiocy.—In the *Lancet* of January 5, 1889, reference is made to an article in a Holland medical journal on this subject. On examining, *post-mortem*, the skulls and brains of idiots, in a number of cases the cortex was found to be damaged, and the marks of the forceps on both sides of the skull, corresponding to the brain injury, were quite perceptible. Depressions of the skull caused by instrumental delivery, by damaging the cortical substance and leading to atrophy of the hemispheres, is more frequently the origin of idiocy than is generally supposed.

The Opium Treatment of Melancholia.—(1) As prolonged a stay in bed as possible, to prevent cerebral anemia. (2) Every morning on awaking, a glass of Hunyadi water. (3) Tincture of nux vomica, five drops twice a day before meals. (4) Laudanum in progressive doses, beginning with five drops morning and evening; the dose to be increased by five drops each day, until distinct amelioration ensues. The writer never had occasion to exceed in this way two hundred drops daily, but would not hesitate to increase the dose beyond that if need be.—*Annales Medico-Psychologiques—Boston Med. and Surg. Journal.*

Skulls of the Seventh Century.—DR. DIGHT gives an account in the *Journal of the American Medical Association* of his examination of a collection of human skulls which are stored away in an old monastery in the Kedron Valley, midway between Jerusalem and the Dead Sea. The doctor, who is Professor of Anatomy in the American College at Beirut, Syria, has made a careful comparison of these skulls with those of the same race at the present day. The measurements show some significant differences. The Caucasian skull has, during the past thirteen centuries, increased in circumference nearly two inches, and has gained in cranial capacity three and a half cubic inches. There has been no increase in width. The brain has gained in height and length; that is to say, there has been a development of the upper and anterior parts of the brain, the parts which we should expect to increase by education and civilization, as they preside over the moral and intellectual functions. The lower portions of the brain, in which the lower or more selfish propensities are centered, and which give breadth to the head, have, in the march of the centuries, failed to grow as rapidly as the higher brain centres, hence the non-increase in the width of our skulls.

The Pathology of Chorea.—The experiments of E. RETTERER (*Révue des Sc. Méd.*) seem to locate the lesion of chorea in the corpora quadrigemina. The function of these bodies apparently is to coapt reflex and sensory movements. In most cases of chorea and hemichorea, lesions of the quadrigemina were found, as well as of the fibres passing through the internal capsule. Tumors of the quadrigemina are often accompanied by hemichorea. The author was able to induce chorea-like movements in animals by producing circumscribed lesions of the quadrigemina.—*N. Y. Med. Jour.*, Dec. 29, 1889.

PUBLIC HEALTH.

By W. R. CLUNESS, M.A., M.D., Sacramento, Cal.

Mortality.—The deaths registered in 56 town districts of the State during the past month, in a population of 701,800, correspond to an annual rate of 14.69, the total mortality having been 859. 111 deaths were due to zymotic diseases, giving an annual mortality of 1.89 a thousand. Of these 43 were due to diphtheria, 1 each to scarlet fever, measles, whooping cough, remittent fever and typho-malarial fever; 14 to cerebro-spinal fever, 21 to typhoid fever, 5 to diarrhea and dysentrey, and 4 each to erysipelas and cholera infantum. 286 deaths were attributed to diseases of the respiratory organs, giving an annual rate of 4.89 a thousand. Of these 165 were due to consumption, 92 to pneumonia, 22 to acute bronchitis, and 7 to congestion of the lungs. The average annual death rate from all causes occurring in the ten largest cities and towns in the State, and representing a population of 586,000, was 14.11. The highest rate for the month, occurring in cities having a population of 10,000 or more inhabitants, was reported from Oakland; the lowest from Chico and vicinity.

The Necessity for State Boards of Health.—Florida has at last awakened to the necessity of the establishment of a State Board of Health, the Governor having called a special meeting of the Legislature for that purpose, and for the consideration of general sanitary matters appertaining to the State. Had she an active Board in operation years ago, there is good reason for believing that much of the injury inflicted on her people, as well as upon her neighbors, by the recent visitation of yellow fever would have been averted. It is therefore hoped that the few remaining States in which there have been as yet no such Boards established, will take warning, so that by intelligent action and coöperation with similar organizations throughout the Union, the most effectual means known for the prevention of such epidemics may be in constant and general operation. By the supineness, begotten of previous immunity and fancied climatic advantages, a single State became the means of entailing upon a whole nation untold anxiety and worry, with their attendant evil consequences. It is therefore to be hoped that States, as well as individuals, will have learned wisdom by the visitation alluded to, and that the motto "an ounce of prevention is better than a pound of cure" will be practised by all; for it is just as much the duty of a State to adopt all known sanitary measures for the preservation of the health of its people as it is that of a municipality or an individual. Why should I, for example, be compelled to keep my premises in a healthful and sanitary condition, that the lives of my family and neighbors may not be jeopardized, any more than the State? And it is clearly the duty of the authorities in each State to take the initiative in all matters appertaining to the health and well-being of her people, and to establish a nucleus from which shall emanate all recent useful and necessary information appertaining to sanitation. The masses of the people the world over know but little regarding sanitary matters; they should therefore be taught by physicians, who are the proper guardians of their lives and health, how best to prevent them; how best to guard against the poisons and polutions that carry in their bosoms the seeds of sickness, and that a knowledge of the proper care of life and health is the most sacred and important duty imposed upon them. Were governments to pay more attention to sanitary science than they do to politics, or to the death of a few Samoan savages, mankind would soon become both healthier and happier, and the scriptural period of longevity would become more universal.

METEOROLOGY.

By J. W. Robertson, B.A., M. D.

California—Tabular Statement for February, 1889.

STATIONS.	TEMPERATURE.						RAINFALL.		Mean Relative Humidity	WEATHER.			WIND.	FURNISHED BY—
	Mean..........	Highest........	Lowest........	Mean Highest..........	Mean Lowest..........	Mean Daily Range..........	No of Days Rain Fell......	Total Rainfall..........		No. of Clear Days......	No. of Fair Days......	No. of Cloudy Days......	Prevailing Direction.	
Auburn..........Cal.	49.7	76.0	32.0	....	....	....	......	0.52	....	......	......	......	SE.	Southern Pacific Co.
Berkeley.........“	51.4	70.2	33.5	58.1	40.9	14.6	5	0.54	81.6	19	3	6	N. N E.	Obs. Univ. of Cal.
Colfax............“	47.4	76.0	22.0	....	....	....	......	1.20	....	......	......	......	....	Southern Pacific Co
Eureka...........“	47.9	68.0	28.0	55.8	40.7	15.0	10	1.93	82.8	8	8	12	N.	Signal Service U.S.A.
Fresno...........“	50.5	75.0	27.0	62.2	38.1	24.1	3	0.32	71.2	18	4	6	N. W.	“ “ “
Keeler...........“	47.2	72.0	21.0	58.4	35.4	23.0	0	T.	36.7	20	6	2	SE.	“ “ “
Los Angeles....“	54.8	84.0	33.0	68.9	43.9	25.0	5	0.92	54.7	18	8	2	W.	“ “ “
Monterey.......“	50.1	70.0	28.0	....	....	....	......	0.94	....	......	......	......	SE.	Southern Pacific Co.
Napa...........“	....	......	....	....	....	....	......	....	....	......	......	......	....	Sta. Napa Ins. Asylum
Oakland.........“	....	....	....	....	....	....	......	....	....	......	....	....	....	J. B. Trembley, M.D.
Paso Robles....“	46 1	69.0	22.0	....	....	....	......	0.98	....	......	......	......	S.	Southern Pacific Co.
Red Bluff.......“	51.6	80.0	26.0	63.2	38.5	24.8	4	0.71	60.8	11	14	3	S.	Signal Service U.S.A.
Sacramento....“	50.3	76.0	31.0	61.0	39.3	21.7	4	0.33	70.6	13	12	3	SE.	“ “ “
San Diego.......“	54.6	85.0	37.0	70.8	45.1	25.7	5	1.80	74.8	19	6	3	NE.	“ “ “
San Francisco..“	52.5	75.0	39.0	61.2	46.8	14.4	6	0.72	72.8	13	14	1	NW.	“ “ “
Santa Barbara..“	55.4	80.0	35.0	65.0	45.5	....	4	1.29	67.0	24	2	2	W.	Hugh D. Vail.
Santa Cruz......“	52.9	73.0	35.0	....	....	....	......	1.37	....	......	......	......	S.	Southern Pacific Co.
Yuma..........A. T.	59.4	78.0	34.0	71.4	46.3	25.1	1	0.06	41.7	21	3	4	N.	Signal Service U.S.A.

Blank (......) indicates data missing.

Occidental Medical Times.

JAMES H. PARKINSON, L. R. C. S. I., EDITOR.

COMMUNICATIONS are invited from all parts of the world. When necessary to elucidate the text, illustrations will be furnished without cost to the author.

SACRAMENTO: APRIL, 1889.

NEW LAWS.

In reviewing the work of the past session, it will be unnecessary to follow the course of every measure that has been mentioned in former articles. Some of these have perished in committee, while others have survived that ordeal to die of inanition at a later stage. The following, having received the Governor's signature, have become law: Senate Bill 150, relating to rape, and raising the age of the woman from 10 to 18 years. Senate Bill 190, establishing a branch insane asylum at Ukiah, and Assembly Bill 62, establishing one at some point, to be hereafter selected, in Southern California. We have already expressed our opinions regarding these measures, and have only to repeat that the asylum in Mendocino was not needed; can only be used with advantage when railroad facilities are obtained, and may meanwhile interfere with the needful appropriations for existing institutions. Assembly Bills 102 and 103, providing for the construction of two infirmaries and certain repairs at the Napa Asylum, have been approved. Senate Bill 11, relating to the sanitary condition of factories and workshops, has also been approved. The bills introduced by the State Board of Health have met with a very gratifying success, and the following have been approved: Assembly Bill 210, relating to the appointment of health officers in the smaller towns; Senate Bill 89, relating to the granting of permits for the interment or cremation of human bodies; Senate Bill 92, providing for a general vaccination throughout the State; Assembly Bill 216, relating to the registration of deaths, and Assembly Bill 213, appropriating money for the use of the Board in the prevention of the introduction of contagious diseases. Assembly Bill 301, providing an additional assistant physician for the Napa asylum, and Senate Bill 183, which makes the same provision for the Stockton Asylum, have been approved. Senate Bill 616, which virtually opens the asylum at Agnews for the reception of all classes of the insane, placing it on the same footing as the other asylums, has also been approved.

The following bills, which had passed both Houses, failed to receive the signature of the Governor and have therefore been lost: Assembly Bill 565, appropriating $80,000 for a medical college in San Francisco for the Medical Department of the State University. This bill was amended in the Senate, to include the establishment of a chair of homeopathy. In this the Assembly refused to concur, and the Senate subsequently receded from its amendment, so that the bill passed in its original form. Senate Bill 624, providing for the appointment of a stenographer, and a physician to make autopsies, by coroners, in cities of 100,000 or more inhabitants, has also failed to receive the Executive approval. This bill would only apply to San Francisco, where its necessity has long been apparent. Dr. W. E. Taylor, the present coroner, assured us that the measure was needed, and conclusively demonstrated his position. It would have facilitated justice and have been a positively economic measure. Senate Bill 625, providing for the appointment of a State Veterinarian and assistants was introduced by a special committee, and was well received by both Houses, but has shared the fate of the preceding measures. Assembly Bill 648 providing for the appointment of Health and Market Inspectors in cities of 50,000 inhabitants and over, has also failed to become a law. The bill was intended to legalize the appointment of officials, whose services have been found to be absolutely necessary, and whom, we understand, are actually engaged in this needful work in San Francisco. Assembly Bill 211, creating the office of State Sanitary Inspector, allowing him a moderate salary amd providing for his expenses, failed to meet the Executive approval, We have already referred to the advantages which the State at large would derive from the services of the proposed officer. Like all sanitary measures, this was an economic one, for the prompt suppression of an epidemic and its check, when in an incipient stage, means a saving to the community which cannot be estimated in money. It is now in order to pay the members of the State Board of Health for the services which they, from time to time, must perform in the absence of a State Sanitary Inspector. A little reflection impresses one with the fact that had these measures been calmly considered at some other period than the few days subsequent to the closure of an extended session, it is more than probable that the majority would now be laws. In some cases no doubt there were misrepresentations; in others misconceptions; but it is difficult to believe that their rejection was the result of deliberate judgment.

Amongst the bills that failed to pass both Houses we select the following: The bill to regulate the practice of pharmacy reached a second reading in the House, but was not acted upon by the Senate. Senate Bill 445, providing for the services of matrons in prisons and jails, will no doubt be again brought forward when, with our growing population, its need becomes more apparent. It was refused passage. Two bills were introduced to regulate the practice of veterinary medicine and surgery, against which several members from the rural districts appeared to have decided objections, apparently in view of the possible disturbance of vested interests. Of these, Senate Bill 127, a perfectly useless measure, was refused passage. Assembly Bill 417, which was a great improvement on the foregoing, was introduced in both Houses, but met the same fate. Senate Bill 468, the new Medical Practice Act, never emerged from committee. It was introduced at a late date, and, as no one took a special interest in its welfare, it quietly succumbed. Assembly Bill 450, which was also introduced in the Senate, had been brought forward by the San Francisco County Medical Society, with the object of affording some slight protection to the profession in suits for malpractice. At one time its existence was threatened by Assembly Bill 562, which proposed to repeal the original Act, under whose provisions the profession were to be placed. This bill was subsequently withdrawn, but some opposition was developed from an unexpected quarter, and this measure, in which the whole profession should have been actively interested, was lost.

LEPROSY.

The very interesting and instructive paper on "Leprosy in Hawaii," by Dr. F. B. Sutliff, which appears in this issue, should be read with attention by every practitioner on the Pacific coast. The author's intimate acquaintance with the disease in all its forms, and his extended experience in a locality where it is endemic, entitle him to speak with authority. Further, we believe that his position on the questions of the identity of the disease, its contagiousness and its prophylaxis is fully supported by the evidence, much more of which could be adduced.

The importance of a definite understanding on the question of contagion and the acceptance of this fact is of considerable moment. Until the profession recognize that leprosy is as positively and indisputably contagious as syphilis, glanders or diphtheria, we shall be exposed to the inevitable danger which attends the free association of a leper with those who are "clean." With the object of emphasizing his opinions on this vital question, Dr. Sutliff has appended to his paper a report of four cases, in which the disease has appeared in persons, previously healthy, when residing in California. The first case, that of the Hawaiian, does not strictly bear upon this point. He was probably infected previous to his arrival in this State, and may even have been a leper. The case was included for the purpose of showing that the disease may enter our borders, under *any* system of inspection, in its earlier stages. In the remaining three cases there can be no such explanation, and we think that the advocates of the non-contagiousness of the disease will find it a difficult matter to refute this evidence. All were born of healthy parents, all were healthy up to a certain date, living in the same community and under the same conditions of life as thousands of others. In each case the disease developed until it attained an unmistakable stage, and in every instance there seems to be a fairly distinct and possible source of contagion.

The disease is slow in its development, and all these cases have doubtless for a long period been possible foci of infection, yet mingling freely with friends and relatives on terms of intimate intercourse. The disease in its earlier stages was unrecognized, but when plainly marked the result will be the same when the terrible danger of infection is practically unknown. Leprosy is very slow in its progress—it may extend over many years, and who can say, even in these cases, that others have not been already infected. For these reasons it will be necessary to educate the laity so that they may support the hands of the profession, and this at once leads to the question of treatment. As far as we know at present there is none; the disease is hopelessly incurable and certainly fatal. This will be the great obstacle in dealing with the question intelligently, but its recognition, however distasteful, is equally imperative. Upon the acceptance of these two propositions, contagiousness and incurability, hinges the success or failure of the problem which confronts us to-day.

The existence of isolated cases of leprosy in California has long been known. These cases were at first confined to the Chinese and Hawaiians, but now include our own people. We believe that there is to-day in this State more leprosy than we have had any idea, and that many of these cases have never been recognized. This is due to two facts: First, that the disease in its early stages is not easy of recognition, except by those who have had special opportunities, and there are hundreds of experienced practitioners who have never seen a case of leprosy. Bearing this in mind, it will be seen how any conscientious physician would hesitate in pronouncing, or even in hinting, that his patient was the subject of such a loathsome disease. Second, we believe that most of the cases are in the rural districts, and may therefore rarely encounter a physician. In 1888, Dr. H. S. Orme, the President of the State Board of Health, impressed with the importance of the subject, issued a circular letter of inquiry to various persons throughout the State. Unfortunately, many of these letters remain unanswered, and the data obtained is insufficient for publication. Our own investigations, however, at a recent date, support the opinion which we have expressed; for, with the exception of San Francisco, there is not a single case known to the health departments of the larger cities.

In dealing with this important question we have no excuse to plead ignorance or want of experience. The matter has been thoroughly discussed, and we can take Hawaii to-day as an example for every detail. Our only safety lies in: (1) The rigid inspection of immigrants from infected localities, especially Hawaiians and Chinese; (2) The supervision of these races within our borders; (3) The early and absolute isolation of all cases. The machinery by which this can be accomplished must be carefully considered and fully discussed. We feel that the subject is of great and urgent importance, and that it will demand the attention of the Legislature at no distant date. We trust that the question will attract the general attention of the profession, and especially of the State Society, which will soon convene. Meanwhile, we shall be pleased to publish anything that will furnish more light, or which will add to our knowledge of the disease in California.

NOTES.

State Society—Rates and Fares.

The Nineteenth Annual Meeting of the State Society will be held at B'nai B'rith Hall, 121 Eddy street, San Francisco, April 17th, 18th, and 19th, and there is every indication of a most successful meeting. The committee of arrangements announce the following reduction in transportation rates: On all railroads a rebate of 33⅓ per cent. on first class unlimited tickets to physicians (including their families) attending the meeting. In order to obtain this reduction, the receipt of the agent is to be taken at the time of purchasing the ticket, and a blank form for this purpose will be sent to each member. This form must be endorsed by the Secretary at the meeting, and upon presentation to ticket agents, at San Francisco, the rebate will be made upon the *return ticket.* This reduction is available up to Monday evening, April 22d, 1889, and we urge upon members, even from towns close at hand, to avail themselves of it, as the condition is attached that fifty tickets must have been sold before the company will allow the rebate. The P. C. S. S. Company will not make any reduction. The hotels have also refused to make a rebate.

The Exhibition.

The exhibition of drugs and surgical instruments, which was such a decided success last year, will be repeated at this meeting. The following firms have, up to date, signified their intention of participating: Wm. R. Warner & Co., Redington & Co., Fairchild Bros. & Foster, Charles H. Phillips Chemical Co., Langley & Michaels, Horlick Food Co., Armour Beef Extract Co., Helvetia Condensed Milk Co., Duncomb & Co.

Voluntary Papers.

The following comprises the voluntary contributions which have been received to date: "Mojave Desert for Climatic Treatment of Consumption," by James P. Booth, Needles; "The Value of Iodoform, Corrosive Sublimate and other Antiseptics in the Treatment of Diphtheria," by Walter Lindley, Los Angeles; "The Relation of the State to the Medical Profession," by G. F. G. Morgan, Olema; "Medicine and its Practice of the Past, Present and Future," by C. Dransfeld, Kelseyville; "Pelvic Abscess in Women and its Treatment by Abdominal Section," by B. McMonagle, San Francisco; "Surgical Treatment of Perityphlitis," by Joseph Kurtz, Los Angeles; "An Interesting Case of Tumors," by J. H. Borde, Cambria; "On Ophthalmology and Laryngology," by J. D. Arnold, San Francisco; "Eye-Strain as a Factor in the Causation of Nervous Symptoms," by G. C. Pardee, San Francisco; "On Medical Legislation," by G. L. Simmons, Sacramento. It will facilitate the work of the committee of arrangements if intending contributors would report at the earliest possible opportunity.

The Discussions.

The experiment of designating a member to open the discussions on the various reports proved so successful at the last meeting, that it will, we trust, now become the rule. The following are the Standing Committees, with the names of the chairmen, and of the members who will open the discussion in each Section: Practical Medicine, J. H. Stallard, San Francisco; Geo. Chismore, San Francisco. Surgery, C. G. Kenyon, San Francisco; J. F. Morse, San Francisco. Obstetrics, W. A. Briggs, Sacramento; R. Beverly Cole, San Francisco. Botany and Adulteration of Drugs, W. P. Gibbons, Alameda; A. L. Lengfeld, San Francisco; State Medicine, M. M. Chipman, San Francisco; H. S. Orme, Los Angeles. Histology, A. Abrams, San Francisco; D. W. Montgomery, San Francisco. Mental Diseases, W. H. Mays, San Francisco; W. S. Whitwell, San Francisco. Medical Education, Geo. Chismore, San Francisco; A. H. Pratt, Oakland. Gynecology, B. McMonagle, San Francisco; W. H. Mays, San Francisco. Diseases of Children, Walter Lindley, Los Angeles; H. M. Sherman, San Francisco. Ophthalmology, H. Ferrer, San Francisco; Geo. H. Powers; San Francisco. Medical Topography, J. P. Widney, Los Angeles; J. W. Robertson, Ukiah.

American Pharmaceutical Association.

The thirty-seventh annual meeting of the American Pharmaceutical Association, will be held at San Francisco, commencing on the 24th of next June and continuing in session for five days. It has been customary to have associated with the meetings a display of drugs, chemicals, pharmaceutical preparations and other articles of interest. As this is the first meeting ever held on the Pacific Coast, it is expected that there will be a special effort made in this direction, and that the display will be both instructive and interesting. Prof. E. W. Runyon (53 Stevenson street, San Francisco) is the Secretary of the local committee.

The Medical Corps, U. S. Navy.

The Board of Examination, referred to elsewhere, will be constituted of Medical Director, Adrian Hudson, as President, with Medical Inspector, G. W. Woods, and Surgeon Dwight Dickinson as members. The naval examination is a fair, though rigid one, which any graduate from our Pacific Medical College, ought to be able to pass with credit, provided he has been through the various grades of our public schools, or received an equivalent education in private academies. On being declared qualified, the candidate will at once—until the present large number of vacancies is filled—receive a commission, accompanied by a good income, a position giving every advantage for the practical study of his profession, and the allied sciences, with social advantages of the highest order, both at home and abroad, and opportunities for travel under auspices unknown in civil life. A new navy is now being rapidly constructed, and, with this increase of our naval force, it is absolutely essential that the medical corps of the navy—never too large for the active needs of the service—shall be filled to its maximum. For this purpose, Surgeon-General Browne has ordered the Eastern Board, which has for so many years met annually in Philadelphia—as the great American centre of medical education—to spend a portion of the spring of 1889 in New York City; and, if necessary, this same Board will be transferred later to Boston, Chicago and other centres. The Pacific Coast is, however, too remote for such a transfer, and the journey East too expensive for the uncertain candidate, which has influenced the Surgeon-General in organizing the Special Board at Mare Island. Its method and standard will correspond in every way to those of the present Board in Philadelphia. Not many years ago, the navy was full of bickerings, during the existence of what was then termed the "Lore and Staff" controversy, which seemed to make the position of a medical officer in the navy one to be avoided by any individual having a particle of self-respect or independence. There was much truth in the views then entertained, and preceptors without exception warned medical graduates against entering the naval service. But, with the lapse of time, these contentions have practically come to an end, so far as the medical corps is concerned; peace and harmony prevail. The rights of the medical officer—

senior or junior—with all the privileges belonging to his rank, are now fully recognized; and we cordially welcome this opportunity now offered to our Western graduates to enter the honorable service of the United States, afloat.

SOCIETY PROCEEDINGS.

SAN FRANCISCO COUNTY MEDICAL SOCIETY.

Regular Meeting, February 26, 1889.

The President, GEO. CHISMORE, M. D., in the Chair.

New Member.—NICHOLAS RUSSELL, M. D., was duly elected a member of the Society.

Tobacco.—DR. G. F. SHIELS read a paper upon this subject. His conclusions were drawn from personal observations from questions propounded to nearly five hundred smokers during a journey of thirty miles daily for one month, which he had taken for the purpose of conversing with smokers, and lastly from the answers to a series of questions which were printed and sent to more than one hundred prominent physicians in Europe and America. His conclusions summarized are as follows: That the use of tobacco is so general, and that, in spite of the death penalty of the Sultan Amurath, the writings of King James I, and the laws and popular crusades against it, this use has continued to spread, are facts which show that tobacco must fulfil some human want. The human race have from the earliest times employed narcotics. I believe tobacco to be a mild narcotic which the average adult quickly tolerates and which, taking into consideration its almost universal employment and the general health of those using it, cannot be looked upon as harmful. Excluding the youth and invalids who have an idiosyncrasy, I feel justified from my reading and observation, in stating that, when used in moderation and at times when the stomach is not empty, tobacco has a beneficial effect. Like all other luxuries, the use of tobacco is liable to be abused; this abuse being evidenced by disturbance of the cardiac, mental, digestive and other functions, due to a paresis or paralysis of the cerebro-spinal and sympathetic nervous systems.

DR. M. C. O'TOOLE did not think that smokers were so liable to pharyngitis as persons who were compelled to inhale the smoke from others.

DR. L. VAN ORDEN had never seen any reason to believe that the use of tobacco benefited the teeth; on the contrary, by allaying the sensibility of the mouth, it frequently made people neglect the use of the tooth brush, and in this way the teeth suffered. In chewers the necks of the teeth were softened from the constant contact of the tobacco plug with the gums. The grave aspect of the use of tobacco was in relation to boys, among whom the habit of smoking was becoming more prevalent, and he deemed it the duty of the profession to use their influence in checking the evil.

DR. J. C. SUNDBERG said that much of the constitutional disturbance from which smokers suffer might be attributed to the carbonic oxide resulting from combustion rather than to the nicotine.

DR. J. H. STALLARD remarked that the ill effects of tobacco were seen most frequently in persons who use snuff, while chewers suffer more than smokers, as the swallowed juice, in all probability, interfered with digestion. As the tendency of moderate smoking was to diminish the force of the cardiac contraction, it might be very beneficial in plethoric persons.

DR. L. BAZET said that the varying effects produced by smoking cigars depended on the volatility of the nicotine, and consequently there was less of this substance in an old cigar than in one freshly made.

Entertainment of the State Society.—On motion of W. W. Kerr, the Society decided to tender a banquet to the visiting members of the State Medical Society at its next meeting. The chair appointed as a committee for this purpose, C. G. Kenyon, H. H. Hart, G. J. Fitzgibbon, W. W. Kerr, and C. C. Wadsworth.

Regular Meeting February 12, 1889.

The President, GEO. CHISMORE, M. D., in the Chair.

New Members.—J. H. BARVAT, M. D., and SAMUEL TEVIS, M. D., were duly elected members of the Society.

Radical Cure of Hernia.—DR. BAZET reported two cases operated on by him, at the French Hospital, for the radical cure of inguinal hernia by Professor Bassini's method. After giving the topography of the muscular layers and aponeuroses of the inferior antero-lateral region of the abdomen, he said these layers could very seldom be made out in cases of hernia, because of the abnormal condition of the parts. The muscular fibres, for instance, would be condensed in one place, distended in another, and, in still another situation. scattered. For example, the hernial sac of the first patient here reported was nearly subcutaneous in almost its whole extent, the external oblique being so atrophied that it could hardly be distinguished. Hence the difficulty of having a clear idea of the number of layers to be traversed in any individual case is insuperable, because of individual differences of anatomical structure, and also from the pathological changes consequent on the hernia. The great point to be kept in mind is the relation of the sac to the internal ring. Professor Bassini's operation, as given in the *International Journal of Surgery and Antiseptics*, is as follows: "The aponeurosis of the external oblique muscle is laid bare and cut through from the external ring to the internal ring. The neck of the hernial sac is then separated from the spermatic cord, and tied or sutured at the situation of the internal ring. It is next divided and the ligated part is returned to the abdominal cavity. After pushing aside the spermatic cord, the posterior margin of Poupart's ligament is exposed, and the musculo-aponeurotic layer, consisting of the internal oblique and transversalis muscles and the transversalis fascia is dissected off from the subserous stratum in such a manner that it can be brought in close apposition to the posterior margin of Poupart's ligament. These parts are united by sutures for a distance of from two to three inches, commencing externally at the ileo-pubic tubercle, and extending to the place where the spermatic cord enters the abdominal cavity. The cord is next replaced, and the aponeurosis of the external oblique sewn up, an opening being left that is large enough for the cord to pass through without compression. The cutaneous wound is then closed, after providing for drainage. This operation restores the inguinal canal to its natural condition, the internal opening and the posterior wall are new formed, while the external ring is merely narrowed. Moreover, the canal is restored to its normal oblique position, so that the posterior wall, which is pressed forward by the intra-abdominal pressure, is supported by the anterior, and the canal thus permanently closed. Another advantage claimed for Bassini's method is that the new formed posterior wall, which is composed of muscle and aponeurosis, is permanent, and will not disappear like the cicatricial plug in Wood's operation. Of the author's

102 cases, 95 were reducible and 7 strangulated hernias, in 98 the hernia was complete oblique, and in 4 complete direct.

The following conclusions were formulated: (1) The method is absolutely without danger. (2) It effects a radical cure in a short space of time. (3) It obviates the necessity of wearing a truss as after the other operative procedures. Dr. Bazet followed this method in both cases with excellent results. The ages of the patients were thirty-eight and fifty-eight years respectively; both were suffering from reducible hernias, the first being of sixteen and the second of twenty-three years' duration. He presented his first case to the Society for examination. In operating he uses the sublimate solution (1:1000) until he has divided the aponeurosis of the external oblique. He uses Thiersch's solution (boracic acid, 12 parts, salicylic acid 2 parts, boiling water 1000 parts), during the time the hernial sac is being divided, and the musculo-aponeurotic layer is being dissected off from the subserous stratum, and these parts are sutured together again; then he uses the sublimate solution. He places great stress on the correct application of the bandage after the operaation, so as to get firm, even pressure. The bandage is applied, the thigh being flexed and abducted, so that it tightens down on the abdominal walls when the limb is extended and abducted.

Dr. G. F. Shiels complimented Dr. Bazet on his results, and strongly urged the performance of the operation except in very young children. The danger of the operation was comparatively slight to the danger which continuously threatens every energetic man suffering from hernia, and even the relief from the necessity of wearing a truss, the best of which are uncomfortable and fit imperfectly, is in itself a sufficient recompense for the trouble of undergoing the operation.

Dr. H. H. Hart said that he was very much interested in the case just reported by Dr Bazet, and he would now take the opportunity of reporting a case on which he had operated about four years ago. He was called one Sunday morning to see a gentleman who for eighteen hours had been suffering from a strangulated hernia (enteroepiplocele). He immediately placed the patient under chloroform and reduced the hernia. The bowel had passed well into the scrotum, carrying with it a portion of the omentum, which had completely surrounded the bowel. The omentum from inflammatory processes had become adherent to the sac and could not be returned. The hernia had originally occurred twenty-six years ago, during service in the army. The patient remained in bed some time after the return of the bowel, but found it a rather difficult task to walk in an upright position on account of, as he remarked, "a pulling on his insides." This was attributed to the adherent omentum. An operation for the radical cure of the hernia was suggested, and to this the patient readily agreed. The operation was performed three months after the case had been first seen. The hernia had meanwhile frequently come down, but the patient had no trouble in reducing it himself. Czerny's method was employed. An oblique incision four inches long was made and the sac opened and carefully dissected off the adherent omentum, which was found to be a hardened mass of fatty tissue, with an opening in the centre into which the bowel would frequently pass. This was amputated, after passing a ligature around its upper portion, and the stump returned. The portion removed weighed 1¼ oz. The pillars of the enlarged ring were then brought together by means of two catgut sutures, leaving sufficient space for the spermatic cord. In this way, by bringing the two surfaces of a serous membrane together sufficient inflammation would arise to cause a union of the parts. The superficial wound and that of the sac were brought together with silk sutures. The operation was performed about four years since. The patient is now forty-six years of age, is in perfect health, attends to his usual business as a store-keeper, and suffers no inconvenience from the operation, while he has the satisfaction of the non-return of the hernia. The speaker could not agree with Dr. Shiels that all cases of hernia in adults should be operated upon. It was true that there had been a great advance in abdominal surgery, with antiseptics, etc., but he would not advise anyone who had a simple hernia which could be retained by a properly applied truss, to be operated upon, as there was always more or less danger. An operation was only necessary when the hernia was troublesome, either from strangulation or where a truss would not retain it.

DR. J. H. STALLARD read a paper on *The Death Rate of San Francisco.* (*Vide* vol. iii, p. 118,)

NORTHERN DISTRICT MEDICAL SOCIETY.

Regular Meeting held at Red Bluff, March 22d, 1889.

The President, ALBERT FOUCH, M. D., in the Chair.

MORNING SESSION.

The entire morning session was occupied by the trial of M. E. Van Meter, M. D., on the charge of unprofessional conduct, which resulted in his expulsion from the Society.

AFTERNOON SESSION.

Treatment of Fracture of the Femur in the Straight Position.—DR. W. F. MAGGARD, of Corning, reported the following case: On Dec. 3d, 1887, he was called to attend Mr. H—, and found a fracture of the upper third of the femur, which he dressed with the long splint and straight position, with extension and counter extension and a weight of fifteen pounds. He directed the patient to remove some of the weight when necessary, retaining sufficient to control muscular contraction. At his next visit Dr. Maggard found that the patient had removed one-half of the weight, and that there was two inches shortening. He applied nineteen pounds, all of which the patient insisted upon retaining; for, upon subsequently removing a part of it at one of his visits, it was reapplied as soon as he had left. The doctor then extended the adhesive strips to the seat of the fracture, with a view of lessening the strain on the ligaments of the knee. When union had taken place he removed the dressings every other day, and imparted passive motion to that joint. All extension was removed at the end of eight weeks. There was practically no shortening, and but slight anchylosis.

DR. J. S. CAMERON, of Red Bluff, said that he did not like the straight splint, since he had once seen a case so treated, which resulted in three inches lengthening. This case required resection. He believed the double inclined plane to be the only proper appliance with which to treat such fractures.

DR. J. H. MILLER, of Redding had had better success in transverse fractures of the femur, with the Austrian plaster of Paris splint, made very wide, without using a counter extension weight. The leg was left free, the thigh only being confined.

Water—The Cause or Origin of Fevers.—Under this title DR. HERMAN SCHAFER, of Igo, read a paper, in which he said: Investigation has confirmed the belief that water has, in a large number of cases, been responsible for epidemics of typhoid fever, malarial fever, etc. The water from all wells is liable to be contaminated with organic impurities. These enter the water in the atmosphere, as it falls in rain. They mingle with it as the water trickles through the soil. The contamination of rain water becomes still greater should it drain alluvial deposits, or should it carry sewage into wells. The silicious sand stones and granite rocks of the Azoic age furnish the purest waters, while the lime stones and magnesian rocks furnish an indifferent water, which becomes saturated with carbonate of lime and magnesia and organic matter. This organic matter is the cause or origin of contagion and infection.

DR. CAMERON cited a case in Europe of an epidemic of typhoid fever which was found to originate in the milk of cows affected with typhoid symptoms. The water supply to these cows was found to be foul.

DR. G. I. CASON, of Red Bluff, said that in the locality in which he practised medicine in Illinois, ponds were abundant, but there was no typhoid fever.

DR. MILLER said the sewerage and drainage of Redding, where he had practised for nine years, was very poor, but that he had seen but one case of typhoid fever in the town during that period.

DR. A. W. HAGENBUCH, of Red Bluff, remarked that while warmth seems necessary for the rapid development of typhoid fever germs, they will remain alive in snow for many months.

An Obscure Case.—DR. MILLER reported that on January 1, 1889, he was called to see a girl aged seventeen, whom he found in convulsions. She had well-marked anemia. She had menstruated but twice in eight months. After she recovered from her convulsions she would have violent and persistent headache. At the end of five weeks there was a slight paralysis of the entire left side from which she quickly recovered, except that she now has persistent convergent strabismus of the left eye.

DR. W. D. CLARK, of Cottonwood, said he thought there was some spinal trouble in this case. In 1876 he had had an attack of diphtheria one of whose sequelæ was persistent strabismus, which was relieved by applying blisters to the neck.

Implantation of Teeth.—DR. J. H. EPPERSON, of Red Bluff, demonstrated, before the Society, the operation of implanting a natural tooth in an artificial socket. The tooth to be replaced was the left incisor of a man, which had been extracted twelve years ago. The tooth to be implanted had been removed from a patient three months ago; the pulp cavity had been drilled out and filled with gold. Previous to the operation the tooth was immersed in an antiseptic solution at a temperature of 90° F. The operator then injected a few minims of a four per cent. solution of cocaine into the gums and alveolus and proceeded to drill a suitable cavity for the new tooth. This being done he, pushed the tooth into its proper place, and fastened it to its neighbors with waxed silk floss. In ten days he expected it to have formed firm bony union. In illustration of this Dr. Epperson then exhibited in another patient a tooth which he had implanted five months ago. The tooth seemed as serviceable as its fellows. The doctor then gave a demonstration of "bridge work," which in suitable cases dispenses with a plate, by fitting a bridge with three teeth to supply the place of three upper incisors.

Report of Executive Committee.—The Chairman of the Executive Committee reported that there were two illegal practitioners within the district. These were A. Meyers, at Paskenta, and a certain Chinaman, Men Luk, who resided at Millville. The committee was instructed to institute proceedings which would lead to the conviction of said illegal practitioners.

SPECIAL CORRESPONDENCE.

GERMANY.

[FROM OUR OWN CORRESPONDENT.]

Operations on the Larynx.—Thiersch's Method of Skin Transplantation.—Sulfonal.—Meeting at Wiesbaden.

The topic which at the present chiefly occupies the thoughts of the medical world here, spoken or unspoken, is, not unnaturally, the nature and treatment of cancer of the larynx, and indirectly the possibility of a different result having been obtained in the case of the late Emperor. Professor von Bergmann, as you have already heard, has received an apology from the committee of the British Medical Association for the indiscretion shown in publishing a "script" of the dying Emperor, which was to be construed as a depreciation of Bergmann's manipulations, and now the purely scientific side of the question is being ventilated in a number of papers and essays by various medical authorities. It appears undeniable that Sir Morell Mackenzie is guilty of the grave offense of having published "cooked" statistics—whether intentionally or not, is too delicate a question for me to discuss here. Anyhow, the numbers and results appended to his pamphlet "Frederick the Noble and His Physicians," have been clearly proved by Dr. Max Schier (*Deutsch. med. Wochenschr.*) to be highly incorrect. I will mention only one instance. A case of cancer of the larynx operated on by Dr. Schede, of Hamburg, had seemed successful for a time, when a relapse set in and the unhappy patient committed suicide. Now, this patient figures twice in Sir Morell's list (No. 54—58), and as similar errors are repeated more than once, the results appear far less favorable to operative measures than they should. Although we are all well aware that "if there is anything more delusive than facts it is figures," and that such a row of heterogeneous numbers is after all of very little value in either direction, still we must confess that so incorrect a publication merits the scornful refutation it has met with here.

As I just now referred to a case of Dr. Schede's with an undesirable result, it is perhaps only fair to mention another one, in which extirpation of the larynx was performed by him with most complete success. The patient was a laundress, and was suffering from undoubted cancer of the larynx. She underwent the operation about four years ago, and when I saw her, some two years since, she was in very good general health and fully able to superintend her business, employing about thirty workers. She spoke in a perfectly audible whisper, preferring, as a rule, not to use the artificial voice trumpet, which had been constructed for her, on account of its very loud, and certainly quite unusual sound; her condition, I am informed, has in no wise deteriorated since then, and she declares herself perfectly happy and contented with her lot. Another patient, operated on by Dr. Schede in a similar manner, had been able to attend to his profession as a dentist for quite a length of time, when he died of genuine pneumonia. In this case only one vocal cord (the left) was removed, the result being that the voice differed but little from that before the first appearance of the growth, as a ridge of mucous membrane supplied the place of the lost cord. Such a result is clearly due to a fortunate combination of circumstances, and is not always to be reckoned on; nevertheless, we may be prepared for a number of equally gratifying reports from other surgeons, now that the question is once on the *tapis*.

A less exciting, but perhaps just as useful a subject, is Thiersch's method of covering large sores and wounds which entail great loss of integument by thin slices of skin cut off just below the epidermis. I suppose that your readers are more or less acquainted with this plan of treatment, but, as it is in many cases really a very valuable aid, perhaps some further details may be acceptable. It is chiefly useful for healing large granulating patches; for instance, those from deep burns, or defects of integument from operative measures; ulcers of the leg of any size can also be healed in a comparatively short time in this way. The *modus operandi* is as follows: After the sore has been gently, but thoroughly, cleared of its granulations by means of a sharp spoon, the edges of newly formed epithelium being also carefully removed, and the hemorrhage effectually arrested, either by the application of iced compresses (Eversbusch) or simple compression with antiseptic sponges, soaked in a 0.75

per cent. solution of common salt; the pieces required for covering are then cut out with a sharp razor, which must, of course, be perfectly clean and especially free from fatty matter. This is best done by a slow, sawing movement, the best place to take the flaps from being the outer side of the thigh, over the trochanter, as the skin there is soft and hairless and can be readily stretched by slightly rotating the leg. Naturally, thorough disinfection is indispensable, but it is not requisite to make the parts bloodless by Esmarch's bandage, nor is the pain so considerable as to make anesthetics necessary, except, perhaps, for highly nervous and timid patients. With a litttle practice one soon acquires sufficient dexterity to shave off flaps the length of a man's hand and an inch or two broad—the larger the better, as by covering the wounds entirely a complete cure is often obtainable in one sitting, and it is rather difficult to adjust a number of small pieces accurately. To remove the blood, these pieces may be placed in the salt solution for a moment, and are then spread out over the surface requiring covering without further delay; the edges of the wound are slightly anointed with a non-irritating salve and the place itself covered with protective silk, moist pads of cotton-wool, a second layer of protective, dry cotton, and a gauze roller. Thiersch advises a daily renewal of the dressing, but this appears, from the observations of other operators, to be by no means imperative. The 0.75 per cent. solution of chloride of sodium is preferable to any other disinfectant fluid, as it does not, like carbolic acid, impede the process of healing. It is worthy of note, that these thin layers gradually increase in thickness by the formation of subcutaneous tissue, which, in course of time, raises the originally depressed covering to the level of the normal integument. In aged and decrepit persons, sometimes these flaps will not unite if taken from the patient's own body, but similar pieces, from younger and more robust individuals, do so readily. Curiously enough, it has been observed that it is much easier to transplant skin from a colored man to a white one than *vice versa*. The wounds caused by the removal of the flaps heal readily with slight cicatrisation, as only the epidermis and a thin layer of the papillary stratum are taken away. Thiersch's method may further, perhaps, be useful in the treatment of inoperable superficial and open cancers. Anyhow, both Prof. Hahn, of Berlin, and Prof. Kraske, of Freiburg, have succeeded in covering such growths by means of pieces of normal skin, after the manner of Reverdin, the advantage being a most welcome diminution of pain, cessation of obnoxious discharge and, in general, a much less distressing state of affairs for the patients, who were by this means enabled to leave the hospital, and even in a measure to resume their former pursuits.

Sulfonal, since it was first described and recommended by Professor Kast, of Frieburg*, little more than half a year ago, has been tried by a large number of physicians, especially alienists, and is steadily growing in popularity. It is in general devoid of unpleasant secondary effects, some unfavorable reports being ascribable to the employment of an inferior preparation. This danger is not to be feared in America, where Bayer's sulfonal, the preparation employed and recommended by Professor Kast himself, is exclusively sold. An unlooked-for result with this remedy occurred in a patient under the care of Dr. Schotten, of Cassel. An elderly lady had been given 30 grains of sulfonal in beef tea on two consecutive evenings, and on the third she had taken 45 grains in order to relieve most annoying muscular contractions due to myelitis chronica, which utterly prevented sleep. Shortly after the third dose a condition of most intense fatigue set in, with a continual desire to sleep, relaxation of the muscles of the neck, retarded and indistinct speech, which condition lasted for four days. At the end of this time a rash, resembling that of measles, appeared, spreading rapidly over nearly the whole surface, but disappearing spontaneously in a few days, although traces of it were still discernible at the end of a fortnight. The description given somewhat resembles that of an antipyrine exanthema, only that in this case a feeling of severe burning was unpleasantly perceptible.

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*Now head physician of the General Hospital in Hamburg.

Some very instructive papers are expected at the meeting of the Association for clinical medicine, to be held at Wiesbaden this spring (April 15 to 18). Professor von Liebermeister, of Tübingen, will preside, and two subjects of much importance, viz.: "Ileus and its Treatment" and "The Nature and Treatment of Gout," are announced for discussion. Papers are already promised by Professor Immermann, of Bâle, Professors Fürbringer and Lewin, of Berlin, and several other eminent physicians. Wiesbaden is celebrated for its picturesqne scenery, its mineral springs and other attractions, which are well worth a visit, and any American *confrères* who are taking a trip to Europe may be certain of a hearty welcome.

February 25th, 1889.

VIENNA.

Anatomy and Pathology.—Typhoid Fever.—Anti-Semitic Feeling.—Prof. Kaposi.—Politzer's Clinic.—Electricity as an Illuminant.—Continued Salivation.—Prof. von Dittel.—Braun's New Forceps.

Anatomy and Pathology, the foundation of all medical study, receives in Vienna, as in Berlin, especial consideration. The faculty is not alone in recognizing their importance, for the government, with substantial financial aid, has erected royal institutions in their name. The Anatomical Institute is entirely devoted to that branch of medicine. It is a large and spacious structure of stone, with an entrance, vestibule and main stairways worthy of a palace. There are four roomy sections saals, excellently lighted, ventilated and drained, and provided with spacious antechambers, where the students are permitted to handle and study the specimens in the numerous cabinets. Liberal financial aid is given by the government, so that free entrance, and the enjoyment of all its privileges, including a plentiful supply of dissecting material, is to be had for a very small sum—not more than $6—from October to March.

The study of pathology is fostered in an equally admirable manner. The department is situated within the hospital grounds, in a great building of four floors. Two amphitheatres, each accommodating 400 students, occupy the wings of the main building. Here Professor Kundrat and his assistants give lectures and demonstrations daily, on the pathological specimens gathered during the previous four and twenty hours. As, on an average, *ten* autopsies a day are made; the pathological specimens are both numerous and varied. A stipulation of admission to the hospital is the permission to examine the organs in case of death. A patient dies, and soon is wheeled into the section saals, the autopsy is quickly and skillfully made by expert hands; the organs carefully tagged with the life history of the disease, and carried into the amphitheatres, where, before the hundreds of students, the microscopic appearances are discussed by the able professors. Sections are then made; some portions perhaps placed in large jars of alcohol and sealed, other portions sent to the microscopical laboratory, where numbers of students, microscope in hand, sit, waiting for the new specimens. Figuratively speaking, the patient is scarce dead before he has been thoroughly and minutely considered—in a pathological sense. The histories of all *post-mortem* examinations are carefully recorded, and comparisons made with the life history, so that rich results are obtained.

From two o'clock, on every day, the funerals of those dead in the hospital take place. The lower floor of the pathological department is partly devoted to the religious rites, and here the bodies of all are carefully prepared and temporarily held, awaiting friends.

The microscopical laboratory, to which I have referred, is situated in the same building. The student is only required to pay for cover glasses, slides, and a few of the rarer chemicals; everything else, including microscopes, section cutters, reagents, and drying ovens, is provided.

Vienna is at present somewhat excited over the prevalence of typhoid fever; 55 new cases being reported during the past week, in addition to the 150 of former weeks. All have been of an exceedingly mild type. Much speculation is afloat in regard to the cause of this increase; the Vienese holding the drinking water to be the purest obtainable. It comes from mountain springs, and its entire course is through an aqueduct, perfectly covered and constructed of stone; yet a perceptible taste is noticeable at times, as well as a strong vegetable odor. It is also true that, owing to a scarcity of rainfall, the supply is now at a minimum, and many of the poorer classes resort to the public wells in the streets, which formerly largely supplied the people with water. These wells are often in close proximity to the main sewers, which may or may not be permeable. Again, it is a frequent source of comment that owing to one cause or another, lack of water for flushing at one time, or the freezing up of the sewers at another, the sewage is blocked. However that may be, the stranger in Vienna often encounters the odors of sewage, and, through their prevalence at nightfall, is lead to believe that any filth epidemic could get a good foothold in the capital of Austria. It is not infrequent to find the loosely-fitting cover of a cesspool in the very entrance to a Vienna house. Such unsanitary construction, with the choking of sewers, the crowded, ill-ventilated compartments of the poorer classes, and moreover, the emptying of a quantity of the sewage into the canal which flows through the city, gives good cause for alarm at the rapid increase in the number of typhoid cases.

In Austria, as well as in Germany and Russia, the feeling of antipathy against the Jewish race is almost at fever heat. Only a few days ago I saw one of the main streets of Vienna under the strongest police protection, to insure the safe removal of a Jewish prisoner from the jail to the law-courts. He had committed a trivial offense, but his nationality had created undue excitement; still, in the face of this race prejudice, we find Jews at the head of no less than four of the main departments in the Vienna clinics, and each one has deservedly filled his high position. The late Prof. Bamberger ranked second to no living clinician; Kaposi, on the Skin, is admittedly at the head; Politzer, on Otology, has no equal in the extent and importance of his work on the Ear; and Neuman, of the Syphilitic Clinic, is a recognized authority—all Hebrews, and all men of superior excellence in their specialties. Bamberger was reputed never to have made a mistake in diagnosis; and it is a curious commentary on human knowledge that he should be affected by a disease that baffled the best skill, in both diagnosis and treatment.

Kaposi is a small and compactly built man, of restless energy. He gives no regular course of lectures in the clinics, but discusses certain phases of the diseases which present themselves during the hour. He has certain hobbies, the differentiation of leprosy, syphilis and lupus, and whether syphilis can exist with either of the others.

In this connection I am reminded of a patient, the subject of leprosy, now nine years in the hospital; already he has lost fingers, toes and sight. In hopes of staying the dread progress, incisions were made into the cornea, but to no avail. He lost his sight months ago. There he sits day by day in the ward, waiting to be again shown as a curiosity. He is truly as much a part of the Vienna Skin Clinic as Jumbo was of Barnum's circus.

Kaposi takes a kindly interest in the unfortunates about him and holds the respect and admiration of the pupils and patients.

The methods of instruction consist in lectures on the numerous patients, taking each day cases illustrating certain diseases. These are paraded before and amidst the class, and the diseases further illustrated by beautifully executed hand paintings and casts which each student is also allowed to handle. One is amazed at the prevalence of lupus. In skin therapeutics the Vienna clinics depend largely on salicyl plaster, pyrogallic acid, lapis, sulphur and mercurial ointments, napthol and iodoform. Except in specific skin diseases, but little internal treatment is given, the external surface receiving all the attention.

Of all clinics in Vienna that of Politzer is the most crowded. Students wait months at a time for the opportunity of enrolling. It is held in a ward largely taken up with beds, tables and specimen cabinets, and during clinic hours the student finds scarcely elbow-room, so packed is it with assistants, fellow-students and the throng of patients. Politzer is in his prime, and accomplishes daily an incredible amount of work. His private practice is arduous, his hospital work taxing, and yet he finds time to delve into weighty physiological problems, such as the normal vibration of the tympanum, etc. He is also a linguist, and frequently during the clinic is heard in English, French and Italian, besides German, which is his mother tongue. He often shows true kindness of heart in his treatment of patients; now giving a small coin to a little sufferer who bravely undergoes the removal of a polypus from the ear, and again, by his personal and special attention to those in acute pain who come to him. Of late he has been testing a metal Eustachian catheter which allows the introduction of a bougie, and the removal of the catheter, leaving the bougie in the Eustachian tube. This is accomplished by the catheter being constructed in two halves, one sliding up on the other and forming a tube. It has worked satisfactorily in his hands.

The use of electricity for illuminating the cavities of the body has received great attention at the hands of Leiter, Vienna's famed instrument-maker. The objections to the instruments so far contrived were mainly that they were cumbersome and that the light was not situated to the best possible advantage. Dr. Roth, assistant in laryngology, has recently introduced a head-mirror with electric light combined, which works admirably. It is so arranged that the line of vision is through the central aperture in the mirror, and not, as is usual, under the mirror. A shade is provided for the eye not in use in the examination.

Amongst the noteworthy cases lately shown in the clinics were a woman still suffering from salivation who had received but one hypodermic injection of mercury last October; a case of lupus with a typical roseolar syphilitic eruption; a woman thriving under the water immersion treatment in extensive burn of the abdomen and legs. She had been thirteen months constantly in the water-bath.

One of the peculiarities of the Vienna clinics is that Prof. von Dittel, whose name would add reputation to any medical centre, is not recognized by the professors. He has a large ward in the centre of the General Hospital, a rich field of clinical work. His classes are always crowded, and yet he is not enrolled in the faculty.

Prof. Karl Braun, of the Obstetric Clinic, has introduced a modification of Simpson's forceps, the wide part of the blades rotating to a certain extent on the shank. He also recommends a gum covering for the steel surface. It makes the instrument firmer in its grip, not chilling to the sensitive mucous membrane, and less formidable in appearance than the usual cold, glistening steel.

G. L. SIMMONS, JR.

VIENNA, Feb. 25, 1889.

CORRESPONDENCE.

The American Medical Association and Specialism.

Dear Sir:—I have read the editorial on *The Journal of the American Medical Association* in THE TIMES of March, and wish to call your attention to an important omission. In volume xx of the *Transactions of the American Medical Association* I find the following: *Resolved*, That this Association recognizes specialties as proper and legitimate fields of labor. After searching through my volumes of *Transactions* I cannot find that this *Resolve* has been repealed. Furthermore, the very fact that the work at the meetings of the Association is divided into sections, is evidence enough that the Association recognizes specialties as legitimate and proper fields of labor. Now, it does not look very consistent for the Association to hold one view and its *Journal* another in regard to specialties or any other subject. And one would think the Association has had enough to contend with in the last three or four years, without having its *Journal* "treading on the toes of reputable members of the profession," as you say. The Association *Journal* has time and again railed at specialists and special societies. Your question, Do the representative men in the Association "hope to drive good men into the Association by abusing them and their work?" is a very proper one. One thing is very certain—the papers read at the meetings of the Association are not of as good quality as those read before the special societies. May this not be on account of the very best men having become rather wearied of having their work and their societies sneered at in the Association *Journal?* Some of the papers read before the Association are "slush"—an inelegant word, but the only one which fits. Such papers ought to be "edited into the waste paper basket." There is enough trash published in some of the fourth-class medical monthlies, without having fresh instalments at the Association meetings. And, rather than be bored by listening to such papers, the best men prefer to stay away from the meetings, and read papers before the special societies. The section officers of the Association should throw out the trash before the sections meet. A section meeting, with two good papers, is better than one with two good ones and a bad one. Perhaps the meetings of the Association will be more interesting, and have more scientific papers, when the best writers find they can go to a meeting without being bored by trash, and can write on special subjects without having the *Journal* sneer at their work and societies.

NEW YORK, March 12, 1880. SPECIALIST.

REPORTS, ANALYSES, AND NEW INVENTIONS.

Arcadian Water.

We have received from Hall, Luhrs & Co., of this city, a sample of Arcadian Water. This is a product of the well known springs of that name, at Waukesha, Wisconsin. An analysis by Professor Walter S. Haines, of Chicago (*vide* p. xxiv), shows it to be particularly rich in lime and magnesium, while the small quantity of chloride of sodium present, excludes that saline taste so unpleasantly prominent in some of the best known waters. Great care is used in bottling, and the water is presented in an attractive form. Arcadian is very highly charged with carbonic acid, and as a table water is most palatable; it has, at the same time, a decided laxative effect. Added to lime or lemon juice, it makes a medicinal lemonade that will satisfy the most fastidious.

MEDICAL NEWS.

LICENTIATES OF THE BOARD OF EXAMINERS.

At a regular meeting of the Board of Examiners, held March 6, 1889, the following physicians were granted certificates to practise medicine and surgery in this State:
Horace Manley Lane, San Francisco; Med. Dep. Univ. of Michigan, June 28,'88,

Henry Connell Allen, San Francisco; Med. Dep. Univ. City of New York, June 16,'87.
W. W. Beckett, Los Angeles; Coll. of Med. of Univ. of Southern California, April 11,'88.
Wade Hampton Bolton, Nordhoff; Memphis Hospital, Med. Coll. Tennessee, Feb. 29,'84.
G. Edward Buxton, National City; Harvard Med. Coll., Mass., June 28,'76.
Daniel Walter Figgins, Santa Rosa; Coll. of Physicians and Surgeons, Keokuk, Iowa, June 14,'77.
St. George Gray, San Francisco; Trinity Coll., Dublin, Ireland, June 30,'87.
Elbert Leslie Huestis, San Francisco; Med. Coll. of Ohio, March 7,'88.
Robert M. Jones, Forest Hill; Western Pennsylvania Med. Coll., March 27,'87.
Richard W. Kent, Sierra City; Med. Dep. Univ. of City of New York, March 6,'86.
Archibald E. McDonald, Los Angeles; Harvard Med. Coll., Mass., March 8,'65.
Winfield Walter McKay, Santa Rosa; Coll. of Physicians and Surgeons, Keokuk, Iowa, June 12,'73.
Redmond Wellington Payne, San Francisco; Northwestern Med. Coll., St. Joseph, Mo., February 26,'89.
Elizabeth Stafford Samm, San Francisco; Med. Dep. Univ. of Michigan, July 1,'80.
Sarah Hall Sawyer, National City; Starling Med. Coll., Ohio, February 26,'80.
William Barton Spencer, San Francisco; Indiana Med. Coll., February 25,'76.
Alexander B. Tadlock, San Diego; Cincinnati Coll. of Med. and Surg., March,'67.

CHAS. E. BLAKE, Secretary.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department of the U. S. Army (Division of the Pacific), from February 17th, 1889, to March 17th, 1889.

Captain Richard D. Johnson, assistant surgeon, is relieved from duty at San Carlos, Arizona, and will report in person to the commanding officer Whipple Barracks, Ariz., for duty at that station. Par. 15, S. O. 57, A. G. O., March 4, 1889.

Official List of Changes in the Medical Corps, U.S. Navy (Pacific Station), from February 20th to March 20th, 1889.

P. A. Surgeon H. B. Scott, detached from U. S. Naval Hospital, Mare Island, Cal., and granted "sick leave."

Assistant Surgeon G. B. Wilson ordered to Naval Hospital, Mare Island, Cal.

Surgeon D. N. Bertholette, ordered to U. S. S. "Thetis."

P. A. Surgeon L. G. Heneberger, detached from U. S. S. "Thetis."

P. A. Surgeon R. Whiting, detached from Coast Survey Steamer "Patterson."

P. A. Surgeon H. T. Percy, ordered to Coast Survey Steamer "Patterson."

ITEMS.

Naval Examining Board.—A Naval Medical Examining Board will convene at the Naval Hospital, Mare Island, California, on April 1, 1889, and remain in session until October 1, 1889. Candidates for examination and appointment must be between 21 and 26 years of age, and must apply to the Honorable Secretary of the Navy for permission to appear before the Naval Medical Examining Board. The application must be in the handwriting of the applicant, stating age and place of birth, also the State and place of which he is a permanent resident; and must be accompanied by letters or certificates from persons of repute, testifying, from personal knowledge, to his good habits and moral character, and that he is a citizen of the United States. If, in reply, the candidate receive a permit, he will notify the President of the Board, and request him to appoint a time for his examination. Candidates will be expected to present testimonials of educational and professional fitness. The Board is required, under oath, to report on the physical, mental, moral, and professional qualifications of the candidate, so that the examinations are necessarily rigid and comprehensive, though simple and practical, and not beyond the attainments of any well educated physician. Further particulars can be obtained on application.

William F. Jenks Prize.—The first triennial prize of $250, under the deed of trust of Mrs. William F. Jenks, has been awarded by the Prize Committee ot the College of Physicians of Philadelphia, to John Strahan, M.D., M.Ch., M.A.O. (Royal University, Ireland,) 247 North Queen street, Belfast, Ireland, for the best essay on the Diagnosis and Treatment of Extrauterine Pregnancy. The Trustees have made arrangements with Messrs. Blakiston, Son & Co. for the publication of the successful essay, which will also appear in the Transactions of the College for 1890.